







REPORT  
OF THE  
BOARD OF DIRECTORS  
OF THE  
CONNECTICUT REFORMATORY  
TO THE GOVERNOR

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A.D. 1896

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HARTFORD, CONN.  
Press of The Case, Lockwood & Brainard Company  
1897



# REPORT.

*To His Excellency the Governor :*

SIR:— We beg leave to report that during the past year we have purchased a site for the Reformatory, adopted plans for the buildings, and begun the erection of the same.

The site chosen is in a remote suburb of Hartford, two and a half miles in a straight line from the center of the city, over three miles by trolley, and a few hundred feet from the Wethersfield line.<sup>1</sup> It consists of fifty-five acres of land, lying in two equal blocks, on either side of Maple avenue, with a total frontage on that avenue of 2,007.1 feet, and having a frontage at its western extremity of 851.7 feet on Fairfield avenue. It lies in the midst of a farming district of several square miles, where population is less than one-third as dense as in the average of rural Connecticut.<sup>2</sup> And since the city will need to grow to about five times its present population before it can expand, in equal radius from the present center, to our property, such isolation as an institution of the kind may require does not seem likely to be interfered with for generations to come.

In the amount of land purchased, as in every matter

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<sup>1</sup> The Elmira Reformatory, with over 1,200 inmates, is within the city limits, and two miles from the center. Population of Elmira, 40,000. Population of Hartford, census of 1890, 56,230.

<sup>2</sup> Population of district, about 20 to square mile. Population of Connecticut (census of 1890), 154 to square mile. Population of rural Connecticut, allowing for our 18 cities 408,722 inhabitants and 255 square miles, 73.5 per square mile. On Maple avenue, for one mile (two miles frontage), no houses. On Fairfield avenue, over one mile long (more than two miles frontage), 12 private houses and one institution, number of houses in 1868 (Baker and Tilden's map, 1869), 13.

of importance, we have been guided largely by the advice of Mr. Z. R. Brockway, Superintendent of the Elmira Reformatory, himself a Connecticut man, whose many courtesies we desire in this public manner to acknowledge.

It seemed to us, as it did to him, that whatever one's personal preferences, the tendency in New England is distinctly away from agriculture; that consequently there is no use in trying to force agriculture into special prominence in connection with the educational side of reformatory institutions; that enough land should be owned to provide the vegetables and milk required for the table, incidentally employing thus such percentage of the inmates as may be especially fitted by preference or otherwise for agriculture or horticulture; but that beyond this the purchase of land is mere waste.

It will be remarked, however, that there are several hundred acres of land adjoining our farm from which purchases can be made, if hereafter required.

Our farm is upon an elevation sloping gently towards the east, and offering good air, with facilities for easy drainage.

Through its convenience of access to the city, teachers can be obtained in the mechanic arts and the English branches for evening work, thus saving about eighty per cent. of the cost in this important item of expenditure.

City water is also available, and the cost of an independent water supply will thereby be saved. This, in one of our public institutions, has already nearly reached the sum of \$40,000 for the plant alone, besides entailing a steady expense for maintenance.

City gas is laid to within a third of a mile of the center of our main front, and will be furnished us if desired.

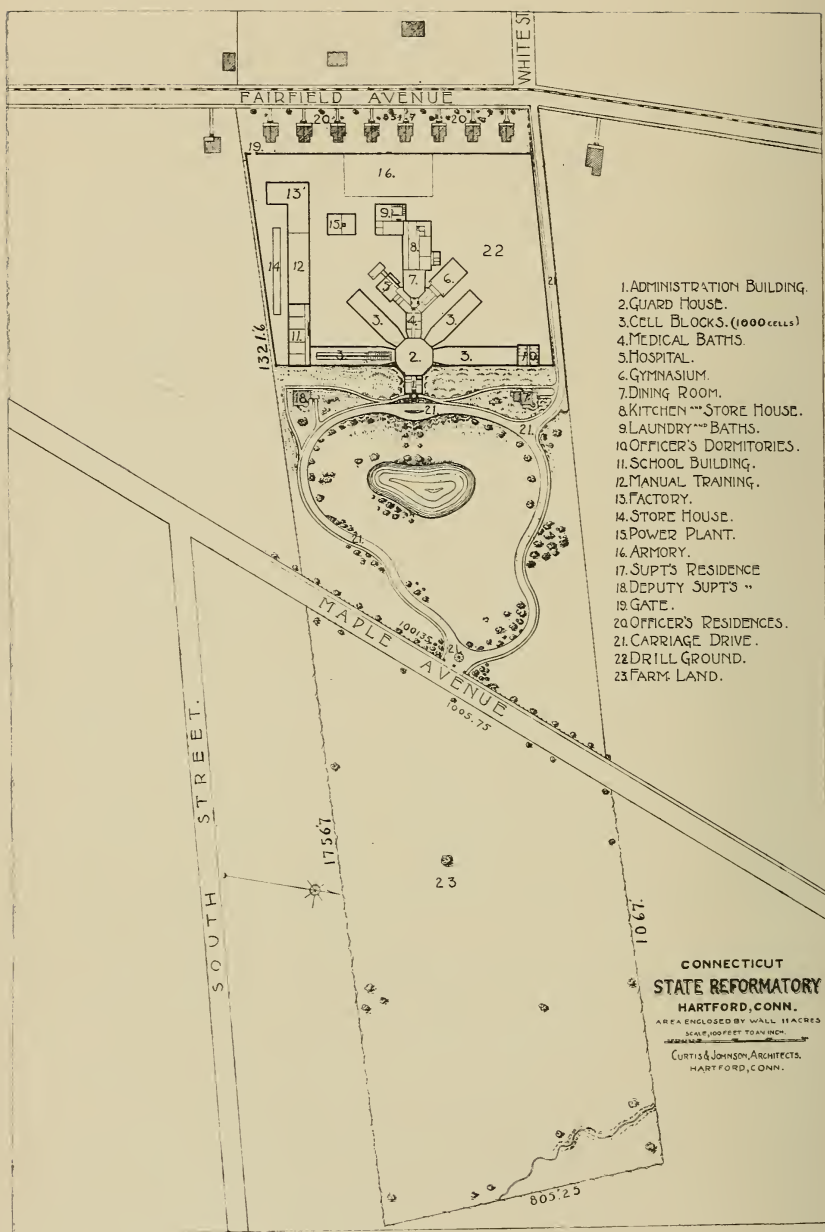
Electric cars pass one of our fronts, and will probably in time pass the other.

A careful consideration of these advantages and of the economy of administration incidental thereto led us to prefer this site over the many<sup>1</sup> examined by us in other localities.

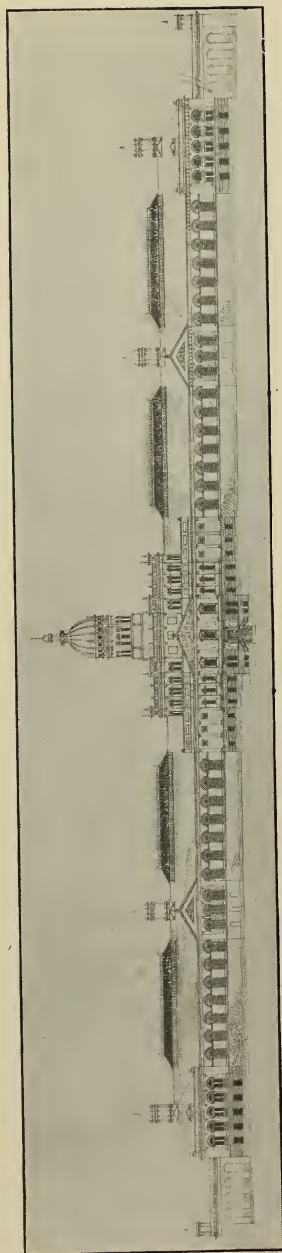
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<sup>1</sup> Seventeen; in nine towns.






SITE PLAN.



ELEVATION OF MAIN FRONT.



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Guided by the experience of two of our number who had been directors of the State Prison, and by the earnest advice of Warden Woodbridge of that institution, as well as of Superintendent Brockway of Elmira, Superintendent Scott of Concord, Mass., and other experts, we have prepared plans of a comprehensive character which will admit of systematic development with time and growth. For lack of this at the outset, many public institutions, and notably our State Prison, are now found to be disjointed, inconvenient, and needlessly expensive of administration.

It has been our design from the first to complete only a fraction of the buildings at present,—barely enough to allow the institution to be fairly started; counting upon the inmates learning building, with other trades, and thereafter doing the main part of the work of construction themselves.

The plans were prepared by Curtis & Johnson<sup>1</sup> of Hartford, whose skill and energy cannot be too highly commended, after visits to Elmira, Concord, and Wethersfield, and consultation with the superintendents of those institutions, who gave the benefit of their criticisms and suggestions and all of whom have laid us under deep obligations. The Board had previously made a study of these and several other penal institutions, visiting them in person for the purpose.

An engraving of the site-plan and the principal elevation is given below.

When finished these buildings will accommodate about one thousand inmates, much beyond which, in our judgment, no institution of the kind can prudently go. The simplicity and completeness of the plans, together with their adaptability to progressive growth, will, we trust, appear on inspection.

Our attention was chiefly given to the interior arrangement of the buildings, with a view to securing the greatest

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<sup>1</sup> Architects of the recent addition to the Hospital for the Insane, Middletown, and other public buildings.

amount of efficiency consistent with proper economy in cost and administration; but in providing the outer covering we gave direction to our architects to avoid the "Bastile" pattern, which, besides being out of date even for prisons of the ordinary type, needlessly offends the eye, and is expensive.

The material is to be brick, with sparing use of stone and terra cotta trimmings for the principal front.

The portions selected by us for immediate construction are the guard house, with 73 feet of the wing immediately west of it; the cell-block south of it—accommodating from 272 to 296 inmates according as steel or brick cells shall be used; and a wing at right angles to this block, at its southern extremity, to accommodate the schools, manual training, and factory work. The heating plant is to be detached. The construction of these buildings should permit the inauguration of the system with a fair degree of efficiency and its development at the lowest practicable rate of cost.

It is our conviction that an institution of this kind ought, as far as may be, to build itself.

The space enclosed at Elmira is sixteen acres, at Concord over twenty. It has seemed to us that eleven acres might suffice here, and our plans provide for that. The enclosure will be effected in part by the buildings themselves; in part by a wooden fence to be succeeded by a brick wall constructed by the inmates.

Upon the portions above indicated we have begun work. The contract for preliminary grading and for protecting the walls was given to E. Balfe of Hartford, and his contract is completed. The contract for the concrete footings was given to the Hartford Paving and Construction Company of Hartford, and their work is finished. The contract for the foundations and the course of stone above was given to the H. Wales Lines Company of Meriden, and their work was well advanced when it was arrested by legal proceedings in the City Court of Hartford, based upon what has since been judicially determined to be a misapplication of the law

(Chapter CCCXXIV, Session of 1895), "Concerning the establishment of Private Asylums." It was, however, held by the Court that the state was under obligations to have a building permit, although the same had been refused under the supposed sanction of this law.

A renewed request for a permit was again refused, without the assignment of any cause, and from this "order" of the Building Inspector we have appealed to the Judge of the City Court, and the appeal is now pending.

We trust your Excellency will approve our course in defending the supremacy of the laws passed by the General Assembly of this State and approved by the Governor against what seems to us a plain attempt at nullification, made by persons claiming to represent one of the communities which the State herself called into being. And we think it our duty to ask you to notice the seriousness of the situation should any such attempt be established as a precedent.

Upon the work as above outlined we have spent as follows :

Land and buildings thereon,	.	.	\$17,000.00
Architects' fees,	.	.	1,296.48
Engineer's fees,	.	.	337.75
Concrete footings,	.	.	2,333.32
Grading and protecting walls,	.	.	1,292.08
Legal fees,	.	.	500.00
Superintendence,	.	.	82.50
Plumbing,	.	.	154.94
Joiner's work,	.	.	58.94
Stenographer,	.	.	50.00
Sundry bills,	.	.	146.11 — \$23,252.12

Of this amount, \$19,512.86 has been paid, leaving a balance due and unpaid of \$3,739.26, for the greater portion of which orders have been drawn, as provided by law, but payment thereof refused by the Comptroller.

In the above is not included the contract with the H. Wales Lines Company, which amounts to \$18,662 and is not wholly completed.

In addition to the unexpended balance of the present appropriation, an appropriation of \$300,000 will, in our opinion, be required to enable the State to occupy the institution. Of this, a disproportionate amount will go to the guard house which, though it will serve for the institution at its maximum of development, must, of necessity, be built in full proportions at the beginning. When it is remembered that the Hartford County jail has cost \$274,000, and that the State prison is inventoried at \$450,440, having cost perhaps half as much more, this amount will hardly seem excessive.

But, in any event, its expenditure will be an economy to the state and to the local communities. No person will be committed to the Reformatory who would not otherwise have been an inmate either of one of the county jails, or of the State Prison. To the extent to which the Reformatory is developed, therefore, those establishments will be relieved.

Moreover, the cost of support in the Reformatory will, in no case, be much in excess of that in the other institutions named, and, in a great number of cases, it will be much less.

In the Hartford jail the net cost per week for each inmate is about \$2.25; in the State Prison it is \$2.33. The net cost at the Elmira Reformatory, in 1886, when productive labor by the prisoners was as yet untrammelled, was less than one dollar per week; and even in 1895, when productive labor was greatly restricted, it was only \$2.79.

There are, however, numerous instances, familiar to every selectman, police magistrate, constable, and police officer, where, owing to frequency of arrest and trial, with intervals in hospital or almshouse, the direct expense of the misdemeanant to the community rises far above any of the figures above named — amounting, not infrequently, as has been carefully ascertained, to as much as \$4.40 per week for the greater part of the year, and from year to year without interruption, until death brings relief.

The confinement of such persons for the maximum term

provided in our Act would, therefore, be a probable economy even if it were to end there. But it appears that an average detention of twenty-two and one-half months in a Reformatory, with its system of steady work aimed at permanent results, of discharge conditioned on demonstrated ability and disposition for honest self-support, and of careful oversight during the period immediately succeeding discharge, effects the substantial reformation of from seventy-five to eighty out of every hundred prisoners. At our jails, on the contrary, but little permanent influence for good is possible; and even at the State Prison the proportion of permanent reformations will hardly rise beyond thirty in a hundred.

The financial problem is, then, briefly, the expenditure of from \$2.25 to \$4.50 per week for a period ranging from a few weeks to many years, with no results, as against the expenditure of possibly \$2.80 per week for two years or less, with seventy-five per cent. of good results. And there is an obvious economy here, even though no account be made of the tendency of persistent vice on the one hand, and of restored virtue on the other, to reproduce itself in rapidly-widening circles as time goes on.

To us, therefore, it appears plain that, however great the cost of a Reformatory, the state cannot afford to be without one.

The only alternative is to leave matters as they are — which is a sheer waste in dollars and cents, to speak of nothing else, or to establish a Reformatory in every county jail, or in connection with the State Prison.

To the former course there are, however, the following serious objections: (1) The expense of certain heavy items, especially for teachers and apparatus for trade, and other instruction would be multiplied by not far from eight, and if left to the counties to pay would fall with crushing weight upon at least five of the eight. (2) The smaller number of inmates would increase the net cost per head. (3) An extensive revision of our laws would be required.



To the latter course there are the following objections : (1) The ultimate expense could not possibly be reduced, since new land and new buildings would equally be required in Wethersfield. (2) The attempt to fuse the two institutions would be comparable to that of trying to combine grammar and high school in one : both would probably be badly damaged if not ruined. (3) The popular formula would still be "sent to Wethersfield," and this brand would deprive the institution of one of its greatest auxiliaries — the promise to the convict of a chance to make a new start unembarrassed by the first mistake. (4) A prison for the more hardened and for demonstrated incorrigibles will always be required, and its management and methods will necessarily be quite different from those of an institution designed primarily for the less hardened and the corrigible. In saying this we have no design to prejudice the cause of Reformatory methods for persons committed to State Prison. On the contrary we welcome the beginnings made by the management of that institution in this direction. And we note with satisfaction that, under the act establishing the Reformatory, inmates of the State Prison may be transferred to the Reformatory, if thought best by both boards ; and it seems to us quite probable that certain parts of the Reformatory system, as the indeterminate sentence and conditional discharge, might with utility be employed in the cases of many not thought fit to be so transferred.

In its action thus far in regard to the Reformatory, the State has used the greatest caution and deliberation, and has in our judgment no cause to revise or reconsider its conclusions. Modern reformatory legislation was foreshadowed in our Colonial laws of 1650, 1702, and 1715.<sup>1</sup> An Act establishing a Reformatory was favorably reported by the Judiciary Committee of the General Assembly of 1893, and was ordered printed with the public acts of that session. Favorable men-

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<sup>1</sup> See report of Hartford committee on out-door alms, A.D. 1891; Appendix, pp. 39, 40.

tion of the enterprise was made in the inaugural message of the present chief executive. The existing law is a revision and enlargement of the Act of 1893, made by the Hon H. G. Newton, chairman of the Committee on Humane Institutions in the General Assembly of 1895, assisted by the Hon. Simeon E. Baldwin of the Supreme Court, the Hon. Francis Wayland, dean of the Yale Law School, the Hon. Samuel Fessenden, speaker of the House, and others. It has been subjected to the scrutiny of five legislative committees and two state legislatures, and is now on the statute books as it left the hands of its authors in 1895, save that, owing to temporary financial embarrassments, the amount of the appropriation immediately available, which is also all that the board would have been able, under any circumstances, to expend between the two sessions, was reduced from \$150,000 to \$50,000.

We respectfully urge, therefore, that it has passed the stage of discussion and experiment even here, while in several other states it has been a valued part of the penal machinery for periods ranging from a few months to twenty-two years.

Should the finances of the State, however, be judged to be in such condition as to make the immediate expenditure of the whole amount recommended by us impracticable, we suggest that it be made available in equal portions during the next two or even three years.

Our act covers (1) female misdemeanants of 16 and upwards; (2) tramps and habitual drunkards of 16 and upward; (3) misdemeanants between 16 and 30; (4) such inmates of the Wethersfield institution as by mutual agreement of the two boards may be transferred to our care.

There are no statistics available to show just how many persons would be liable to be committed to a Reformatory under this act, but there were 474 jail commitments of males alone, under twenty-one, in 1895; there were 42 males between sixteen and twenty-one at Wethersfield in 1896; and

of the 231 in this latter institution between sixteen and thirty, the warden was of the opinion that there were about 160 who would better be transferred to a Reformatory. It is therefore plain that our institution in its infancy could not hope to accommodate all the persons covered by the above four categories, and it seemed to us that males should first be looked after, as being many times more numerous than female delinquents, leaving the special department for females, provided for in the act, to be created later.<sup>1</sup> Among males it is our present purpose to give preference to cases between the ages of 16 and 30, using in this the discretion allowed by the act.

In attending to the duties of our office we have held during the year twenty-three meetings.

The death of the Hon. E. M. Chapin, which occurred December 19th of this year, deprives the Board of one of its most valuable members. Having served upon the Board of Directors of the Wethersfield prison he had personal knowledge of the necessary shortcomings of our penal system as it then stood, and was ready to welcome the reformatory idea. He was with the Board in its tour of inspection, was member of the committee which favorably reported the present site, and heartily advocated the adoption of the present plans.

He was present at every meeting of the Board except when detained by illness, and contributed by his kindness and clearness of judgment to that absolute unity of counsel which has distinguished the proceedings of this body. He has rounded out a record of duty well done — in business, in

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<sup>1</sup> Jail committents of males under 21, June 30, A.D. 1894-June 30,  
A.D. 1895, . . . . . 474  
Jail commitment of females under 21, June 30, A.D. 1894-June  
30, A.D. 1895, . . . . . 44  
Total jail commitments of males for the same year, . . . . 7,368  
Total jail commitments of females for the same year, . . . . 474  
Many of these are recommitments. The number of separate persons  
is not known.



town affairs, in the General Assembly, and in religion, by his zealous and uncompensated labors for those unfortunates whom the State has committed to our care.

Respectfully submitted,

J. J. McCOOK,  
GEO. W. SWAN,  
WALTER HUBBARD,  
FRED'K A. SPENCER.

HARTFORD, December 31, A.D. 1896.



State of Connecticut.

# REPORT

OF THE

# STATE COMMISSIONERS

OF

# FISHERIES AND GAME

FOR THE YEARS

1895-1896.

TO

His Excellency the Governor,

and

The General Assembly.

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HARTFORD, CONN.:

THE FOWLER & MILLER COMPANY, PRINTERS, 341 MAIN STREET.

1896.



# State of Connecticut.

## REPORT.

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*To His Excellency The Governor,  
and the General Assembly of the State of Connecticut:*

As by law required, the Commissioners of Fisheries and Game respectfully present their first biennial report.

By Chapter XLVI of Public Acts, 1895, was created the Commission of Fisheries and Game, consisting of three members, who, by the provisions of the Chapter, are to serve for two years from the date of appointment, which was to be made by the Governor, on or before May 1, 1895, their successors to be appointed in like manner and to serve for a like term, unless sooner removed by the Governor.

The duties imposed on the Commission by the terms of the bill are "the supervision of hatcheries and retaining ponds, the introduction and distribution of such food fish and game as are adapted to the waters or lands of this State, and the enforcement of all laws relating to fish and game."

"They shall co-operate with United States Fish Commission."

Your Commissioners respectfully submit, that, so far as they were able, they have carried out the letter and spirit of the Act referred to. From the fact that the bill creating the Commission was not approved till April 30, 1895, which was soon after its passage by the Legislature, we did not come into being till the spring distribution of brook trout for that year had taken place. Therefore our report of that distribution is made from such data as we have been able to get from Mr. R. E. Follett, who was Superintendent of Hatcheries and the distribution of fry for the Commissioners of Inland Fisheries, whose successors we are. It is to be regretted that such report is not more complete. The first duty imposed on this Board by the creative Act is the supervision of hatcheries.

The hatcheries, we found on assuming office, consisted of a small building on leased ground at Shelton, fitted with the requisites for shad hatching. This station answers the requirements fairly well.

We found also that the State owned a building at the retaining ponds at Joshuatown in Lyme, not fitted up for hatching purposes, however.

This is all there was in the way of State hatcheries : there was some paraphernalia at "Dividend," that has since been used in shad hatching at another point. The second duty is that of the introduction, propagation, and distribution of such food fish and game as are adapted to the waters and lands of this State.

In the discharge of this duty your Commission was sadly hampered by the fact that, with one exception, the appropriations were specific, and, as we understand it, could be used for those purposes only.

The appropriations for the two fiscal years ending September 30, 1897, were as follows : Brook trout, brown trout, and Atlantic salmon, \$5,000 ; shad and retaining ponds, \$5,000 ; extraordinary expenses of Commission, \$2,000 ; pay and expenses of Commissioners, \$3,000 ; clerical expenses, \$400 ; amounting to \$15,400.

The only appropriation, therefore, where any discretion was allowed to the Commission in its expenditure was the one of \$2,000 under the head of extraordinary expenses. The bulk of this has been, as it seems to us, necessarily used in perfecting the dams at Joshuatown and preserving to the State its very valuable property there.

The propagation and introduction of other fish than those specified in the bill was therefore almost out of the question by the express terms of the appropriations.

As there was not a dollar appropriated for the introduction or propagation of game we have, of course, been unable to do anything in this direction.

That wise and intelligent action looking towards the preservation and increase of the game in the State should be taken is beyond question. In the matter of enforcing the laws relating to fish and game, we respectfully submit that we have done all that we could. There is no appropriation for this purpose either, and as policing one of the chief cities of the State costs about \$75,000 annually it can be hardly expected of us to police the State without a dollar for such needed work. We would respectfully suggest that, in addition to the power of arrest conferred upon us by statute, we be given the powers of grand jurors. It is much easier to find a constable or sheriff who will serve a warrant than to, in all cases, find an informing officer more anxious to serve the State than he is to help his neighbor. As to co-operating with the United States and sister State Commissions.

we report, that most friendly relations have been established with all with whom we have come in contact. During the last year we have co-operated with the United States Commission in the propagation of lobsters, having established an egg-taking station at New London. The reports are that it has been an unusually successful year, but details of the work are not at hand to be embodied in this report. In the matter of shad, we have received very substantial aid from the Government Commission, having received three car loads of shad fry this season. We are also under obligations to the same source for fifty thousand Atlantic salmon eggs. The fry from these eggs we hold in a retaining pond at Poquonock for release in the Farmington River in the fall of 1897.

We expected to get some five millions wall-eyed pike, or pike perch eggs, from the United States Commission, but in this were disappointed, as were the United States as well, none being taken this past spring.

Through the courtesy of the New York Commission we are assured that the coming season we shall get a lot of these valuable food fish for distribution in the waters of our State. As they have thrived well in New York, Pennsylvania, Massachusetts, New Hampshire, and Maine, their introduction into our waters can hardly be termed experimental.

They are a fair game and an exceptionally fine table fish, and under favorable conditions attain a weight of twenty pounds or more.

We are of the opinion that this Commission can be of far more practical use to the State if greater discretion be allowed it.

We can, at small cost, propagate many of our native food fish for inland waters, and more promptly supply the inhabitants with both food and sport, than we can if by specific appropriations we are limited to shad, trout, and salmon, and limited also to particular times. The appropriation bill of the session of 1895 is as follows :

*Be it enacted by the Senate and House of Representatives, in General Assembly convened :*

The following sums are hereby appropriated to be paid out of any money in the treasury, not otherwise appropriated, in full compensation for the objects hereinafter specified for the two fiscal years ending September 30, 1897 : For pay and expenses of the Commissioners of Fisheries and Game and contingent expenses, three thousand dollars. For the propagation and cultivation of shad, five thousand dollars, of which appropriation not over one thousand dollars may be used for the maintenance and completion of retaining ponds at Joshuatown. For the propagation of trout, brown trout,

and salmon, five thousand dollars, of which appropriation not over one thousand dollars may be used for obtaining semi-yearling trout for OCTOBER distribution.

Approved July 1, 1895.

Such appropriation compels the Commission to use the money for the purposes specified and none other. Circumstances and conditions may so change, that, for instance, five thousand dollars are not needed for shad culture, and a portion of the money could more profitably be used in another direction. The limiting the Commissioners to one thousand dollars for the maintenance and completion of the Joshuatown ponds, would in the absence of the extraordinary appropriation have entailed on the State the loss of two of the ponds, and rendered useless the expenditure of the major portion of the State's money, so far laid out in the establishment of this very valuable plant. The dam of pond number one, the larger of them all, would have gone out, and pond number three would have been useless for our purposes, from the fact that it was not of sufficient depth to sustain the life of the shad fry, and had any of them lived through, because of a deep hole in one part of the pond, the fish could not have been gotten into the river alive, and many from number four pond would have also been lost in passing through to the Connecticut River. If the needed expenditure had been twelve hundred dollars to protect the money the State had already invested, in the absence of the extraordinary appropriation, your Commission would have been powerless, and large loss fallen on the State. "Not over one thousand dollars may be used for obtaining semi-yearling trout for *October* distribution." During October, 1895, the temperature was well up in the nineties all the time. If we obtained the fish at all, we must get them outside of the State. "All things are possible, but all are not expedient." We could have bought fish to the amount of one thousand dollars, and with extraordinary effort and success might have placed a very few live fish in some streams. Had we been allowed to distribute in November and December, or whenever the conditions were favorable, there would have been no question as to the feasibility of the scheme. If the State owned and operated a hatchery, with the necessary ponds for retaining and rearing the fry, the whole question would be solved, and the one thousand dollars get for the State far greater return than by purchasing the fingerlings. The trout breeders are not charitable institutions by any means, but run their business — as other businesses are — with an eye single to the



profits to be derived. From the start, the trout fry for distribution in this State have been purchased at a cost of from two mills per fish, the lowest rate, up.

The State of New York reports the average cost for all varieties for the years 1889-90 to 1892-93, at .71 of a mill per fish. Would it not be wise for the careful and thrifty Yankee to take a lesson in economy and productiveness from the extravagant New Yorker? We are far behind other States in these matters. The State of Wyoming has two hatcheries belonging to the State. New Hampshire has nine. These are cited simply to show the fact that East and West, old and new, appreciate the value and economy of operating their own hatcheries. Your Commissioners have, in a small way, established a temporary trout hatchery at Poquonock this season, and earnestly hope for such legislative action as will render possible a permanent and perfect plant for the State's use. We are fully satisfied that under ordinary conditions we can meet any reasonable demand for shad that can be made on us, and consider that the problem of how best to restock our rivers with these fish is completely solved. We can ordinarily turn into the Connecticut River six to eight millions of shad in October of each year — from three to five inches in length. That these have a better chance for life than the infinitesimal shad-fry, with a part of the egg-sac still unabsorbed, is, we think, a self-evident fact; and with this number of such fish annually released, the fear that the shad may be exterminated is groundless, if the laws regulating the catch be lived up to.

It is surprising to note the frequent disposition among men who gain their living through fishing, to disregard the lesson of the goose and the golden egg. Without restrictive legislation there is hardly room to doubt that all the edible or salable fish of this State would be exterminated, and the men employed in fishing obliged to seek other means of subsistence. There are some fishermen who realize the situation and we think the number is growing, but there are still far too many who claim that wholesale present destruction is the legitimate and only safe method of insuring a large future supply.

Neither the fishermen nor the public realize the value and economic importance to the State of the fishing industry. The fishermen, as a rule, have given intelligent thought only to the methods of taking fish, that is, how to take the greatest number, and get them into market in the best condition. Whether or not these methods will exterminate the fish themselves in one or twenty years

is a question about which they do not generally concern themselves. Not one in one hundred of the taxpayers and voters of the State know anything of the money invested in fisheries in this State, nor of the yearly value of the catch, or the sums annually paid by them for fish as food. Apathy is much harder to combat than is opposition, for a prerequisite to opposition is an interest in the subject. The data as to catch and value are quite imperfect and fragmentary.

Section 2510 of the General Statutes directs the owners of a "pound, weir, or other fixed contrivance," or "any fishing pier, seine, drag or gill net used in any waters of this State for fishing purposes," to make written report of the number of shad caught, and also the number of such other kind of edible fish so caught by them between the fifteenth day of April and the 25th day of June in each year.

Thus, the catch for substantially ten months is not reported at all. Why not have each commercial fisherman report his total catch, that the value of this industry be fully shown? Right in this connection it may be well to call attention to apparent incongruities in the statutes as to pounds, etc. Sections 2484 and 2508 need revision. One prescribes that no person shall, on the waters along Long Island Sound, construct a weir or pound within seventy rods of the place where any other weir or pound shall have been constructed and continuously used for ten years preceding. Then follows an exception. Section 2508 says: "No person shall set or use any pound, weir or other fixed contrivance, until the owners shall have delivered to the Fish Commissioners a description of the same.

. . . Said Commissioners shall number them in the order that such descriptions are delivered to them, and the number of each, painted in black figures, each figure not less than six inches long and four inches broad, on a light ground, shall be set and maintained in a conspicuous place on the land end of its leader, and at the seaward end, or near the outer bowl." Why should the owner of one of these contrivances deliver to the Commissioners an accurate description of it and its location, unless the question of the suitability of the location were to be passed upon by the Commissioners? Unless the number given by the Commissioners on such application is to be considered as a license to operate such fixed contrivance, why compel its issuance and display as a prerequisite to the setting and using; and if such be a proper interpretation of the spirit of the law, why compel the Commissioners to issue such number or license on mere application, and by such issue give the State's *prima facie*

approval to what may be a violation of at least the spirit of the law?

Section 2511 seems to exempt fyke fishermen from reporting their catch to the Commissioners. If the object in reporting is to give to the State the number and value of fish caught in its waters, this should be remedied. We call attention to the fact that "A Synopsis of the Fish and Game Laws of the State of Connecticut," issued from the office of the Secretary of State this year, shows incongruities and absurdities that should be removed. For example: Section 2530 groups the gray squirrel with the partridge and woodcock. Section 2536 protects the king-fisher, as active and persistent an obstacle to the State's fish culture as flies. This section protects the English sparrow, and also a bird mentioned as "viris."

We are not worse off in such matters than some of our sister States, on the statutes of one of which appeared a law prohibiting the hounding of deer, and wound up with "but nothing in this section shall be construed as prohibiting the taking of sturgeon in nets."

State pride in the home of "the little red school house" calls for more thoughtful and better expressed legislation. Would it not be well to have all legislation affecting the fish and game of the State submitted to the Commission at the time of its presentation to the Legislature as well as to the Committee to whom referred, inasmuch as the enforcement of such laws devolves on this Commission?

All wisdom in such matters does not reside in either the Commission or the Legislative Committee, but it certainly is not too egotistic to imply that the Commissioners might sometimes be able to make a good suggestion.

Would it not be well also, as there is now a Fish and Game Commission, to add "Game" to the matters referred to the "Legislative Joint Standing Committee on Fisheries," instead of dividing the fish and game interests by sending the latter to Agriculture?

We suggest the wisdom of authorizing your Commissioners, when it can be done at a reasonable or nominal cost, to lease tracts of land as State game preserves. The main expense to the State would be that of posting said leased land, and prosecuting poachers. There is no county, we are sure, where this could not be done, and unless the State means to take up, on quite a large scale, the propagation and introduction of game, its substantial extinction is merely a question of time.

Any observant sportsman knows that at the end of each five year period there is less game in any given section in this State with

which he is familiar. This, too, in face of the fact that Connecticut has more acres in woodlands than it had one hundred years since.

The man who had predicted fifty years ago the extermination of the whale, the buffalo, or seal, would have been laughed at, but what are the facts? The bill under which this Commission came into being prescribes that we shall report to the Governor on or before October 15th, next preceding the convening of the General Assembly. Chapter CCXCIV makes December 31st the date and requires an annual report. Chapter XLVI calls for a biennial report. We respectfully suggest that December 1st is the better date, and that annually to report calls for an unnecessary expenditure of the State's money. Much of interest in the work of the Commission occurs after October 15th, and in our opinion, should be embodied in the report of the doings of the Commission. We cannot forbear the suggestion that the cultivation and distribution of trout and other fish should be placed on the same footing with shad, and the Commissioners instructed to stock the lakes, ponds, and streams of the State. Without doubt many trout have been placed by well meaning men in waters thoroughly adapted to the life and growth of bullheads and eels, but sure death to the trout. Many of the brook trout fry are hurriedly and improperly planted, and but little result obtained. This can be easily remedied.

Chapter CXCVII relating to fishways is not satisfactory to the Commission, as we do not like to entail the expense of a USELESS fishway on any one in the State, and the appropriation of five hundred dollars to each Commissioner per year, for pay and expenses, does not allow of extended travel and investigation. The second fishway at Derby cost the Ousatonic Water Company about twelve hundred dollars to construct.

A healthy and badly scared red squirrel, if the way was free from water — might get up it, but from the knowledge at hand no fish ever has succeeded in doing so, nor is likely to till the breeds are materially improved as to their powers of locomotion. That fishways are needed in many places is a self-evident fact, and we submit that before the sovereign power of the State compels the outlay of one penny by the individual it should be well assured that such outlay will inure to the public good.

We should be able to *see* a fishway that under similar or harder conditions was accomplishing the result desired. We have during our term made the best inquiry and research that the means at our disposal allowed, into the substantially fresh water area of the State.



The table herewith printed gives the results thus obtained. Much more should be done. We should have accurate information about all these waters, giving depth, character of bottom, source of supply, obstructions to passage of fish, temperature of water, sources of pollution, if any, kinds of fish, when stocked, if at all, with what varieties, and success or failure of the attempt to stock, whether public or private water, etc., etc.

The question of the pollution of streams is one that will soon force itself upon the people of the State, not from its relation to the work of this Commission, but as a matter of life and death to the people. Many of our streams that were once the habitat of the brook trout, whose judgment as to the purity of water is as good as the results of a chemist's analysis, are simply open sewers exhaling disease and death on their journey to the sea. It is not abating a nuisance to simply pass it on to a neighbor. The work outlined would be of value in the solution of the sewage disposal problem, and would be of great value to this Commission in determining the proper place for planting certain fish. In this connection we state our belief that in the planting of fish adults or fingerlings will do better and give quicker results than to use fry only for such purpose. It is reasonable to suppose that many of the fry dumped in anywhere and in large quantities, as is often done by the unskilled, are devoured by their natural enemies, such as other fish, frogs, snakes, king-fishers, minks, etc., or die from lack of sufficient suitable food.

No chicken farmer would take his chicks from the incubator and place them in a spot infested with rats, skunks, hawks, owls, etc., and give them his blessing only, and expect them all to reach maturity. Common sense is just as valuable in fish culture as in any other business.

The planting of fish fry in a proper way will produce good results. That they are not so planted under the present system of distribution — we allude to trout fry — is too true. They should be planted near the head waters of the stream, or in the small tributaries, out of the way of the larger fish, and in small numbers. To the uninitiated, the presence of a snake on the bank, or "frog spittle" on a pool, has no meaning, but there is likely to be great mortality among the baby trout when these signs are disregarded. There is no more difficulty in the raising of fish than in raising any other crop. Potatoes must be cared for to insure good results, so too must fry. We are firm in the belief that except for the State aid

extended in the past, most of our streams would not now harbor enough brook trout to start a hatchery with. One stream that we know of, which for years had no trout in it, is now fairly supplied from one planting of fry. The lobster requires intelligent legislation in order that it may continue to inhabit our waters. Being a crustacean, not a fish or shell-fish, it is outside the jurisdiction of this and the Shell Fish commission. The only protection that it has in this State, so far as we know, is given by Chapter VIII, Public Acts of 1895, which provides that "Every person who shall at any time take, sell, or have in his possession, with intent to sell or destroy, any lobster less than seven and one-half inches long, measuring from head to the end of the tail, exclusive of claws and feelers, or any female lobster with the ova or spawn attached, shall be fined not less than ten nor more than fifty dollars, or imprisoned not more than thirty days, or both."

Categorically there are two faults with this Statute :

First—Any one bringing a prosecution under this section, on the ground that the lobster taken was under the prescribed length, would, before convicting the accused, be compelled to have a court decide what "from head" meant ; whether where the head began, or at its junction with the neck.

Second—As the four years of study by Francis Hobart Herrick, Ph.D., has demonstrated that the lobster does not spawn on the average till ten or twelve inches long, all that is needed is to catch lobsters meeting the requirements of our statutes, and legally exterminate this delicious article of food. The seven and one-half inch lobster will weigh, claws, shell, and all, about seven to eight ounces.

This is, indeed, the slaughter of the innocents by law. Instead of being left a *nullius filius*, it should be placed by statute under the jurisdiction of one or the other of your Commissions, and some effort made to preserve it for posterity. Chili has written us in regard to the lobster, and it is safe to assume, that if they succeed in rearing it in their waters, their legislation will be of the class that, as compared to ours, will confer on the lobster the blessing of "length of days," and thereby length of body. As heretofore stated, we have assumed enough right to the lobster to work in unison with the United States Commission in establishing an egg-taking station at New London, for the artificial propagation of the lobster. The report of the Commissioners of Inland Fisheries for 1894, stated that lake trout were distributed. That this fish will live here, is demonstrated by the fact that in one lake, at least, they

have in some instances attained a length of twelve inches. How many have survived is unknown. This last spring we placed in several lakes the ova of the fresh water smelt, the natural food of the land-locked salmon and lake trout, and a valuable food for other fish as well as a delicious pan fish. The apparent failure of the attempt to stock with land-locked salmon is undoubtedly due to a lack of proper food for the young, which these smelt furnish.

In Maine, we have yet to learn of a lake in which land-locked salmon or lake trout abound, where the smelt do not "much more abound." This fall your Commissioners have seen small land-locked salmon, caught in the waters of this State, and undoubtedly spawned here. It, therefore, is not a foregone conclusion, or a fact demonstrated, that these fine game and table fish cannot be successfully bred here. We must respectfully differ from the opinion expressed in the report of 1894, "that it is not wise to establish hatcheries (shad) at any point above Rocky Hill."

We maintain that the point where the most ripe shad can be taken is the best place for the hatchery, and compare the output at Poquonock, on the Farmington River, in a temporary hatchery, with that at Rocky Hill or "Dividend" in proof of our position. We wish to express our hearty thanks for courtesies extended by the Philadelphia, Reading & New England Railroad Co. in the free transportation of fry and the return of empty fish cans; also, for passes issued by the receiver of that road to the president and secretary of this Commission, thereby saving the State such traveling expenses. We wish to extend our thanks to the New England Railroad Co., the Vermont Central Railroad Co., and the New York, New Haven & Hartford Railroad Co., for carrying the fry and returning empty cans free.

No one sooner gets the benefit of good hunting and fishing than the railroads that carry the sportsmen and anglers to and from the grounds. We feel sure that if the "Consolidated" would take the trouble to learn as accurately as it could the amount received during the hunting and fishing seasons from the fishermen and shooters on the Berkshire Division alone they would be surprised at its sum total, and even more anxious to aid the State in our work.

We desire to acknowledge our indebtedness to the United States Commission of Fisheries and Fish, and express our hearty appreciation of the uniformly courteous and intelligent replies to our many inquiries and of the liberal treatment that has been accorded us. The neighboring States of New York, Massachusetts, Ver-

mont, and Rhode Island have been exceedingly kind, and through their Commissioners given us valuable information. We are under obligations to the Hon. Joseph R. Hawley, the Hon. Orville H. Platt, the Hon. E. Stevens Henry, the Hon. Nehemiah D. Sperry, the Hon. Charles A. Russell, and the Hon. Ebenezer J. Hill, for their labors in Washington in behalf of this Commission.

We have made purchases from Maine to Wyoming, and fully appreciate the kind and helpful treatment accorded us by their Commissioners. Special thanks are due to A. Nelson Cheney, State Fish Culturist of New York, for his kind and generous treatment. Pennsylvania has extended to us the right hand of fellowship, and we can safely say that so far forth as Connecticut's relations with all the Fish Commissioners from Maine to California are concerned we are dwelling together in peace and unity.

We have had correspondence with California, advising them in some matters of legislation, and we note with pleasure that our reply is quoted with approval in their report of 1895 and 1896. Your Commissioners have leased for the State at a nominal figure valuable rights on a natural trout stream, and have an option of purchase on a suitable site for a hatchery. We are your servants and shall in all cases do your bidding. We earnestly hope for an order to go forward and occupy, as there can be no question but that this is the true policy and substantial economy for the State. We give you a few appropriations of other States: Minnesota, \$20,000; Wisconsin, \$25,000; New York, \$72,000; New Jersey, \$30,000; Massachusetts, \$14,000; Michigan, \$33,000; Pennsylvania, \$22,500,—all annually; Maine Inland Fisheries and Game, a salary of \$1,000 per year, and expenses to each Commissioner, \$25,000 annually for its work, and in addition a special appropriation to the use of the Coast and Sea Fisheries Commission. These are cited simply to show the general interest taken statewide in the protection, propagation, and introduction of fish and game. We append the usual tables, showing work done, also recommendations as to legislation desired. Through the help of the United States Commission of Fisheries and Fish, we are able to give you cuts of a few fish that either now are, or as we believe, can be made inhabitants of our waters. We also add an account of the retaining ponds at Joshuatown, and the release of the young shad in October last, taken from the "Sound Breeze."

We fully appreciate the almost universal kindness and truthfulness of the press of the State in the articles that have appeared



concerning us and our work since we took office. We should work together, as to be successful we must both be of public benefit. When the Commission is derelict in its duty newspaper comment on the fact is a wholesome and proper corrective, and it is entirely within the province of journalism to administer it. It is also wise to know what the particular trouble is before applying any so-called remedy. Malaria can be more successfully treated with quinine than with strychnine.

In closing this part of our report, we take the liberty of calling the attention of the inhabitants of the State to the fact that should it ever come to pass that our land be void of bird and game life, and our waters destitute of fish, the abomination of desolation would be upon us. With these extinct, the increase of noxious insects would be such as to materially interfere with the raising of agricultural products, while the waters would so teem with animalculæ and larvæ that it would not only be unfit for domestic use, but would be a serious menace to health. Nature, too, "moves in a mysterious way," and we must preserve the natural balance or pay the penalty for our own short-sightedness; and when we pay we find nature an ever willing lender, but one who on settling day demands a high rate of interest. And finally, all of you who love nature in any of her visible forms, and who are blessed with children to share your joys, and, on occasions at least make you appreciate to the full the rest and peace to be found "near to nature's heart," do not fail to often take those children with you on your fishing or hunting trips, and camping excursions. You can instill as much patriotism into the child's mind by means of a woodland lesson, or pointing out the beauty and freedom, peace and good will that abound in some shady nook, as by compelling that young brain to pore over and commit to memory "When Freedom from her mountain height."

True patriotism has its birth in a love of home and country that includes all that gives pleasure or profit and belongs to the patriot's country. The man who does not love home and friends; the old playground of his boyhood days; the woods in which he gathered nuts and shot squirrels and birds; the lakes and streams from whose cool depths he has lured the finny occupant; the trees under which he has lain in young manhood, and dreamed of the things to be; the quiet churchyard where sleep those who link him with the past,—who, in short, has no "beautiful isle up the river time," may "be fit for treason, stratagem and spoils," but is poor stuff to make a pa-

triot of. Give the children a chance to become well acquainted with Mother Earth and some of the secrets hidden in her kindly old bosom.

Respectfully submitted,

HUBERT WILLIAMS,	}	<i>Commissioners of Fisheries and Game.</i>
ABBOTT C. COLLINS,		
JAMES A. BILL,		

## RETURNS OF POUNDS AND TRAPS FOR THE YEAR 1895.

COMMENCING AT STONINGTON ON THE EAST AND EXTENDING TO  
MILFORD ON THE WEST.

Fred Ostman, Stonington.

Pound No. 3—Off southwest Rip Rap.

Pound No. 6—West side Stonington Point.

Pound No. 7—East side Stonington Point.

Pound No. 45—Little Narragansett Bay.

Pound No. 65—Southwest Whamphannock Point.

Pound No. 66—East side Whamphannock Point.

Pound No. 84—Off Nate's Point, east side Stonington Harbor.

Fish Caught—10 shad, 11 barrels weak fish, 102 barrels of edible fish,  
72 barrels bait fish.

Moses H. Wilcox, Mystic.

Pound No. 53—Southwest Woodbridge Island.

Pound No. 60—East Lydia Island.

Pound No. 64—East Convent Rocks.

Pound No. 92—Southeast Andrews Island.

Fish Caught—16 shad, 15 barrels black fish, 18 barrels weak fish, 72  
barrels flounders, 26 barrels alewives, 42 barrels flukes.

R. T. Chapman, Mystic.

Pound No. 55—Off southwest point Andrews Island.

Pound No. 56—East side Mason's Island, opposite fishworks.

Fish Caught—3 barrels squids, 8 barrels flat fish and flounders.

C. H. Noyes, Mystic.

Pound No. 52—South side Dodge Island.

Pound No. 67—East side Dodge Island.

Fish Caught—1½ barrels black fish, 5½ barrels weak fish, 17 barrels  
flat fish, 1½ barrels alewives, 6 barrels flounders, 5½ barrels squids.

Charles H. Eccleston, Jr., Mystic.

Pound No. 119—West end Andrews Island.

Fish Caught—6 shad, 120 pounds edible fish.

D. E. & G. W. Wilcox, Mystic.

Pound No. 105—Southwest Screecher's Rock, Fisher's Island Sound.

Fish caught—10½ barrels flounders, 22½ barrels flat fish.

Samuel M. Cole, Noank.

Pound No. 12—Off Long Point.

Fish Caught—708 black fish, 66 sea bass, 2,349 weak fish, 2,025 floun-  
ders, 6,020 squids, 3,976 flukes, 5,585 alewives.

Samuel M. Cole, Noank.

Pound No. 13—Off Lydia Island.

Fish Caught—518 black fish, 64 sea bass, 940 weak fish, 1,626 flounders, 4,980 squids, 2,840 flat fish, 2,250 alewives.

A. L. Sherman, East Lyme (Niantic P. O.)

Pound No. 28—West side Black Point.

Pound No. 29—West side Luce's fishworks.

Pound No. 30—Off Beckwith Neck.

Pound No. 31—Off Hatchett's Point.

Fish Caught—11 shad, 6 barrels black fish, 7 barrels weak fish, 17 barrels flat fish, 5 barrels butter fish, 6 barrels flounders, 26 barrels alewives.

A. G. Thurber, Poquonock Bridge.

Pound No. 79—East end Bush Point, Groton.

Fish caught—2 shad, 319 black fish, 17 sea bass, 83 weak fish, 164 flounders, 80 white fish.

Amos Bunnell, Poquonock Bridge.

Pound No. 98—Midway Poquonock Beach.

Fish Caught—4 shad, 20 striped bass, 15 barrels black fish, 12 barrels weak fish, 22 barrels flounders, 40 barrels bait fish.

Edwin Hewlitt, Jr., Poquonock Bridge.

Pound No. 49—Northwest point Pine Island.

Fish Caught—4 shad, 541 black fish, 18 sea bass, 232 weak fish, 2,870 flukes, 1,225 butter fish, 1,221 flat fish.

E. W. Morgan, Poquonock Bridge.

Pound No. 50—East of L. Chase's, Groton.

Fish Caught—100 pounds striped bass, 250 pounds black fish, 25 pounds sea bass, 280 pounds weak fish, 300 pounds flounders, 335 pounds flat fish, 161 pounds butter fish.

D. E. Dingwell, Groton.

Pound No. 107—Swallow Cove.

Pound No. 108—at Beach west Goshen Point.

Pound No. 109—East end Powder Island.

Fish Caught—2 shad, 25 barrels flat fish, 44 perch, 700 alewives.

F. H. Beckwith, New London.

Pound No. 5—Off Goshen Point.

Fish Caught—2 barrels shad, 1 barrel striped bass, 1 barrel sea bass, 12 barrels weak fish, 17 barrels black fish, 6 barrels flounders, 1 barrel flat fish, 1½ barrels blue fish.

Brooks & Rogers, Waterford.

Pound No. 110—1 mile east of Millstone Point, Waterford.

Pound No. 111—Goshen Point, west side mouth Creek.

Fish Caught—320 black fish, 525 sea bass, 345 flounders, 225 alewives, 100 porgies.

R. W. Gavitt, Waterford.

Pound No. 38—Near Millstone Point.

Pound No. 39—Continuation of No. 38.

Pound No. 40—75 rods south of Nos. 38 and 39.

Fish Caught—5 shad, 26½ barrels "mixed fish."

Edwin Cruttenden, Niantic.

Pound No. 51—Between Pond's Reef and Steamboat Dock.

Fish Caught—8 shad, 2 blue fish, 8 barrels weak fish, 7½ barrels squids, 1 barrel alewives, 15½ barrels "mixed fish."

Henry B. Cruttenden, Niantic.

Pound No. 78—Crescent Beach at Point of Rocks.

Fish Caught—5 shad, 9 blue fish, 10½ barrels weak fish, 4 barrels squids, 1 barrel alewives, 1 barrel flounders, 7½ barrels "mixed fish."

James M. Raymond, Niantic.

Pound No. 19—North side Niantic Bay.

Pound No. 23—Off Bloody Point.

Pound No. 33—Off Champlin Point.

Pound No. 34—Off Champlin Point.

Pound No. 91—South Wigwam Rock.

Pound No. 100—Off Bloody Point.

Pound No. 101—Off Wigwam Rock.

Fish Caught—5 shad, 6 barrels black fish, 9 barrels weak fish, 21 barrels flat fish, 2 barrels butter fish, 8 barrels flukes, 8 barrels "mixed fish."

E. W. Cook, Niantic.

Pound No. 89—Westerly, off Ram Island.

Pound No. 24—Off Stone Heap, Bond's land.

Pound No. 27—Extension of No. 24.

Pound No. 80—East side of Niantic Bay.

Fish Caught—9 shad, 18½ barrels "mixed fish."

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NOTE—Pound Nos. 24, 27 and 80 not set.

James P. Clark, Niantic.

Pound No. 20—Off Millstone Point.

Pound No. 21—Southeast Goose Island.

Pound No. 22—Off Robert Payne's shore.

Pound No. 25—Boundary line Payne farm.

Pound No. 41—Off Crescent Beach.

Pound No. 42—300 feet further out.

Pound No. 57—West side Millstone Point.

Fish Caught—92 shad, 20½ barrels black fish, 417 black fish, 18 barrels weak fish, 237 weak fish, 18 sea bass, 82 barrels flat fish, 71 barrels alewives, 44½ barrels butter fish, 18½ barrels squids.

Willard Beckwith, Niantic.

Pound No. 75—West side Black Point Bay.

Fish Caught—3 shad, 307 pounds black fish, 200 pounds weak fish, 261 pounds flounders, 2 barrels flounders.

John F. Bushnell, Old Saybrook.

Pound No. 73—Next west Saybrook Lighthouse.

Fish Caught—3,337 shad, 40,000 alewives, 2,000 pounds flat fish and flounders.

D. C. Dibble, Westbrook.

Pound No. 58—Lewis Bay, west fishery.

Fish Caught—227 shad, 103 black fish, 48 weak fish, 82 flounders, 25 blue fish, 2,445 pounds flat fish.

R. H. Stannard & Co., Westbrook.

Pound No. 72—Off Money Point.

Fish Caught—745 shad, 2 striped bass, 133 black fish, 121 weak fish, 2 sea bass, 9 barrels flat fish, 59,310 alewives, 35,680 white fish.

Charles Hurd, Clinton.

Pound No. 54—West side harbor, off Point.

Fish Caught—171 shad, 196 black fish, 25 sea bass, 468 weak fish, 3,000 pounds flat fish.

Dowd & Redfield, Madison.

Pound No. 36—In bay off west wharf.

Pound No. 37—In bay off west wharf.

Fish Caught—525 shad, 27 black fish, 1,813 weak fish, 8 sea bass.

A. P. Foote & John McLean, Stony Creek.

Pound No. 59—East River, Rogers' Island, in Branford.

Fish Caught—103 shad, 10 pounds striped bass, 300 pounds black fish, 600 pounds weak fish, 500 pounds butter fish.

R. E. Bassett, East River.

Pound No. 94—West pound on Madison line.

Fish Caught—51 shad, 3 blue fish, 60 black fish, 867 pounds weak fish, 46 flounders, 1 barrel butter fish, 96 weak fish.

E. B. Field, East River.

Pound No. 95—West boundary line, Madison.

Fish Caught—95 shad, 130 pounds black fish, 250 pounds weak fish.

Reuben E. Hill, Guilford.

Pound No. 93—One-half mile southeast Guilford Point.

Fish Caught—43 shad, 1,240 pounds weak fish, 571 pounds flat fish.

S. Y. Dolph, Guilford.

Pound No. 103—At Riding Rock grounds.

Fish Caught—42 shad, 13 black fish, 12 weak fish.

Ralph B. Hill, Guilford.

Pound No. 88—South Guilford Point.

Fish Caught—88 shad, 252 weak fish.

John R. Fyler, Branford.

Pound No. 90—Indian Neck, near Hammock Point.

Fish Caught—3 shad, 52 striped bass, 10 black fish, 990 weak fish, 75 flounders.



E. R. Kelsey, Branford.

Pound No. 81—Off Cow and Calf Rocks.

Pound No. 82—Off Darrows Island.

Pound No. 83—Off Guinon Reef.

Fish Caught—943 shad, 206 pounds black fish, 2,340 pounds weak fish, 78 sturgeon, 2½ pounds striped bass, 62 pounds eels, 25 bushels alewives.

A. W. Burns, Milford.

Pound No. 120—Harbor mouth of river.

Fish Caught—189 shad, 23 black fish, 292 weak fish, 176 pounds flat fish, 260 pounds eels.

John M. Chapman, Groton.

Pound No. 26—Off Eastern Point.

Fish Caught—32 striped bass, 282 pounds black fish, 233 weak fish, 852 flat fish, 154 pounds flounders.

F. M. Beckwith, New London.

Pound No. 35—Southeast R. R. Point.

Fish Caught—22 shad, 117 striped bass, 2 barrels black fish, 986 black fish, 4 sea bass, 2 barrels weak fish, 936 weak fish, 12 barrels flat fish, 6 barrels scup, 3 barrels flounders.

R. C. Bogue, Poquetanock.

Pound No. 43—East New London Lighthouse.

Pound No. 44—Off Pine Island, southeast New London Lighthouse.

Fish Caught—3,350 black fish, 3,400 weak fish, 2,325 butter fish, 1,900 flounders.

John S. Latham, Noank.

Pound No. 2—Southwest point Ram Island.

Pound No. 15—Northwest point Ram Island.

Round No. 18—Middle Ram Island Bay.

Fish Caught—6 barrels "mixed fish," 1,095 pounds "mixed fish," 4 barrels squids, 2 king fish.

F. N. Burdick, Westerly, R. I.

Pound No. 46—Pawcatuck River.

Pound No. 47—Pawcatuck River.

Pound No. 48—Southeast Stonington.

Fish Caught—721 pounds black fish, 248 pounds sea bass, 1,855 pounds weak fish, 6,000 pounds flat fish, 1,813 pounds scup, 8,250 flukes, 4,530 alewives.

William Spicer, Groton.

Pound No. 1—Off Spencer's Point, Groton.

Not fished.

L. A. Champion, Lyme.

Pound No. 4—Off Stony Point, off Howard's Land.

Not fished.

- E. W. Cook, East Lyme, (Niantic P. O.)  
Pound No. 8—East side Niantic Bay.  
Not fished.  
Pound No. 9—Outside number 8.  
Not fished.
- J. H. Wells, Poquonock Bridge.  
Pound No. 10—East end Poquonock Bridge, Groton.  
Did not set until after July 1st.
- E. M. Ashley, Noank.  
Pound No. 11—West Masons' Island.  
Not fished.
- John S. Latham, Noank.  
Pound No. 14—Northwest point Ram Island.  
Not fished.  
Pound No. 16—East side Ram Island.  
Not fished.  
Pound No. 17—On flats northwest Ram Island.  
Not fished.
- Frank French, East Lyme, (Niantic P. O.)  
Pound No. 32—Snow Point, west Hatchett's Reef.  
Not fished.
- D. I. Babcock, Westerly, R. I.  
Pound No. 61—At Narrows' Point, Pawcatuck River.  
Not set until fall.  
Pound No. 62—Stanto or Ram Island.  
Fall fishing.  
Pound No. 63—Rhode's Folly.  
Fall fishing.
- James Thompson, Westerly, R. I.  
Pound No. 68—West end Osbrooke Point.  
Did not fish until after June 25th.  
Pound No. 69—Southeast Edward's Island.  
Did not fish until after June 25th.  
Pound No. 70—Southeast Edward's Island.  
Did not fish until after June 25th.
- W. P. Latham, Noank.  
Pound No. 71—South end Ram Point, Mystic River.  
Not fished.
- J. P. Cruttenden, East Lyme, (Niantic P. O.)  
Pound No. 76—Sunken Rock, west side.  
Not fished.
- H. Cruttenden, East Lyme, (Niantic P. O.)  
Pound No. 77—Between Goose Island and R. R. bridge.  
Same as above.



E. P. Clark, Stonington.

Pound No. 85—West end R. R. bridge.

Not stated.

Pound No. 87—Watering Place fence, west side.

Not reported.

W. P. Latham, Noank.

Pound No. 86—West side Turner's Reef.

No report.

A. B. Dowd, Stony Creek.

Pound No. 96—South Little Island, Branford.

No report.

Pound No. 97—South Little Island, Branford.

No report.

R. W. Gavitt, Waterford.

Pound No. 99—Near Pleasant Beach.

Not fished.

C. H. Eccleston, Jr., Mystic.

Pound No. 102—Mystic Island Bay.

Not fished.

Dibble, Hayden & Co, Westbrook.

Pound No. 104—West end Grove Beach.

Not fished.

James V. Luce, East Lyme, (Niantic P. O.)

Pound No. 106—Mouth of Bride's Brook.

Trap not set.

Elias H. Champion, Old Lyme.

Pound No. 112—At Guard House Point.

Did not fish.

Charles E. Gates, East Lyme, (Niantic P. O.)

Pound No. 113—West side Griswold's Island.

Pound No. 114—Mouth Black Point Creek.

Not set.

E. Cruttenden, East Lyme, (Niantic P. O.)

Pound No. 115—Southwest side Goose Island, Niantic Bay.

Set after June 25th.

Frank French, East Lyme, (Niantic P. O.)

Pound No. 116—Snow's Point, west Hatchett's Reef.

Set after July 25th.

Joseph P. Cruttenden, East Lyme, (Niantic P. O.)

Pound No. 117—Off Blood Point, west side Niantic Bay.

Not fished.

Edwin Cruttenden, East Lyme, (Niantic P. O.)

Pound No. 118—Off Bond Jam, west side.

Not fished.

6,755 shad caught in pounds in 1895.

## RETURNS OF POUNDS AND TRAPS FOR THE YEAR OF 1896.

COMMENCING AT STONINGTON ON THE EAST AND EXTENDING TO  
MILFORD ON THE WEST.

J. W. Thompson, Westerly, Rhode Island.

Pound No. 70—Southeast Edward's Island.

Fish Caught—1,000 alewives, 1 barrel eels, 1 barrel smelts, 10 barrels flat fish.

Ellery Barber, Westerly, Rhode Island.

Pound No. 72—Northeast end Breakwater.

Fish Caught—3 barrels weak fish, 2 barrels mackerel, 3 barrels flounders.

J. W. Thompson, Westerly, R. I.

Pound No. 4—South side East Breakwater.

Pound No. 68—West end Osborne's Point.

Pound No. 69—Southeast Edwards Island.

Fish Caught—2 barrels black fish, 200 weak fish, 4 barrels flounders, 2 barrels flat fish.

F. N. Burdick, Westerly, R. I.

Pound No. 46—Plumbush Point, Pawcatuck River.

Pound No. 47—Back Osbrook Point, Pawcatuck River.

Pound No. 48—North side Breakwater, Pawcatuck River.

Pound No. 89—Off Barn Island, Stonington.

Pound No. 121—South side west end new Breakwater.

Fish Caught—11 shad, 475 black fish, 3,290 pounds weak fish, 4 blue fish, 1,190 pounds butter fish, 5,150 flukes, 1,045 pounds smelts, 3,953 pounds eels, 3,390 alewives, 10,970 pounds flat fish, 426 pounds porgies.

D. E. & G. W. Wilcox, Stonington (Mystic P. O.), Conn.

Pound No. 126—Off Schreecher's Rock.

Fish Caught—5 barrels black fish, 4½ barrels weak fish, 5 barrels flukes, 28 barrels flat fish, 7 barrels porgies.

Fred. Ostman, Stonington.

Pound No. 3—Off southwest Rip Rap.

Pound No. 6—West side Stonington Point.

Pound No. 7—East side Stonington Point.

Pound No. 45—Little Narragansett Bay.

Pound No. 65—Southwest Whamphannock Point.

Pound No. 66—East side Whamphannock Point.

Pound No. 84—Off Nate's Point, east side Stonington harbor.

Pound No. 128—Hall's Island, Pawcatuck River.

Fish Caught—82 black fish, 3 barrels black fish, 4 bushels black fish, 55 weak fish, 6 bushels weak fish, 45 flukes, 9 barrels flukes, 2 bushels flukes, 525 pounds smelts, 932 barrels alewives, 99 barrels flat fish, 270 barrels bait fish, 17 barrels mixed fish, 1,380 pounds eels, 7 shad.

A. Babcock, Stonington.

Pound No. 108—East side Osbrook Point.

Fish Caught—20 barrels smelts, 1 barrel eels, 1,000 alewives.

R. T. Chapman, West Mystic.

Pound No. 55—Southwest point Andrews Island.

Pound No. 56—East side Mason's Island.

Fish Caught—6½ barrels weak fish, 14 barrels mixed fish.

C. Henry Noyes, Mystic.

Pound No. 52—South side Dodge Island.

Pound No. 67—East side Dodge Island.

Fish Caught—2 shad, ½ barrel black fish, 8½ barrels weak fish, 5 barrels flukes, 4 barrels squids, 12 barrels flat fish.

M. H. Wilcox, Mystic.

Pound No. 53—Southwest Woodbridge Island.

Pound No. 60—East Lydia Island.

Pound No. 64—East Convents Island.

Pound No. 92—Southeast Andrews Island.

Fish Caught—8 shad, 13 barrels black fish, 26 barrels weak fish, 108 barrels flukes and flounders, 25 barrels alewives.

John S. Latham, Noank.

Pound No. 1—Off Spencer's Point.

Pound No. 2—Southwest point Ram Island.

Pound No. 14—Southwest point Ram Island.

Pound No. 15—Southwest point Ram Island.

Pound No. 16—Extension of No. 15.

Pound No. 17—On flats northwest Ram Island.

Pound No. 18—Middle of Ram Island Bay.

Fish Caught—165 alewives, 20 barrels flat fish.

William P. Latham, Noank.

Fish Trap No. 86—Bluff Point.

Fish Caught—277 black fish, 1,646 weak fish, 36 blue fish, 10 sturgeon, 1,520 flukes, 35 alewives, 85 squids, 248 porgies.

Samuel M. Cole, Noank.

Pound No. 12—Off Long Point.

Pound No. 13—Off Lydia Island.

Fish Caught—2 shad, 1,485 black fish, 5,918 weak fish, 80 butter fish, 1,334 flukes, 95 eels, 6,395 flat fish, 3,810 alewives, 8,217 porgies, 40,320 squids.

Edwin Hawlett, Jr., Groton.

Pound No. 49—Northwest point Pine Island.

Pound No 120—300 feet from Poquonock Rocks.

Fish Caught—3 shad, 544 pounds black fish, 1,185 pounds weak fish, 10 pounds blue fish, 188 pounds butter fish, 1,595 pounds flukes, 460 pounds mackerel, 5 pounds eels, 125 alewives.

Amos Bunnell, Groton, (Poquonock Bridge P. O.)

Pound No. 98—Midway Poquonock Beach.

Fish Caught—400 pounds black fish, 9,500 pounds weak fish, 1,000 pounds porgies, 500 pounds mackerel, 200 pounds sea bass, 2,500 pounds flukes, 50 barrels foul fish.

A. G. Thurber, Groton, (Poquonock Bridge P. O.)

Pound No. 79—East side Bush Point.

Fish Caught—2,450 black fish, 150 blue fish, 682 butter fish, 277 flukes, 108 flat fish.

John M. Chapman, Groton.

Pound No. 26—Off Eastern Point.

Fish Caught—47 striped bass, 669 black fish, 447 weak fish, 64 butter fish, 181 flukes, 100 eels, 218 alewives, 524 flat fish.

E. W. Morgan, Groton.

Pound No. 50—East of Latham Chase's.

Fish Caught—3 shad, 15 striped bass, 420 pounds weak fish, 51 pounds black fish, 860 pounds flukes, 157 pounds flat fish, 449 pounds porgies, 7 pounds eels.

F. H. Beckwith, New London.

Pound No. 5—Outside number 35.

Pound No. 35—Southeast Black Point.

Pound No. 125—East end Goshen Point.

Fish Caught—37 shad 7 barrels, black fish, 1½ barrels sea bass, 6 barrels weak fish, 3 barrels butter fish, 4½ barrels flukes, 1 barrel flat fish, 68 barrels alewives, 5,000 pounds alewives.

R. W. Gavitt, Waterford.

Pound No. 38—Near Millstone Point.

Pound No. 39—Continuation of No. 38.

Pound No. 40—Seventy-five rods southeast of Nos. 38 and 39.

Pound No. 99—Near Pleasant Beach.

Fish Caught—2 shad, 3 barrels black fish, 1 barrel weak fish, 2 barrels flukes, 3 barrels alewives, 15 barrels mixed fish.

Brooks & Rogers, Waterford.

Pound No. 110—Dry Pond Point east Millstone Point.

Pound No. 111—Goshen Point west Goshen Cove.

Fish caught—150 black fish, 440 weak fish, 550 blue fish, 580 flukes, 40 porgies, 110 alewives.

Edwin Cruttenden, East Lyme, (Niantic P. O.)

Pound No. 51—Between Pond's Reef and Steamboat Dock.

Pound No. 76—Off Sunken Rocks.

Pound No. 77—Between Goose Island and Draw Bridge.

Pound No. 115—Southwest side Goose Island in Niantic Bay.

Pound No. 78—Crescent Beach and Conneat Rocks.

Pound No. 117—Off Niantic Bay.

Pound No. 118—Off Bond Farm, west side Niantic Bay.

Pound No. 124—Near entrance Four-Mile River.

Fish Caught—34 shad, 2 barrels mixed fish, 1 barrel black fish, 14 barrels weak fish, 2 barrels butter fish, 10 barrels flukes,  $1\frac{1}{2}$  barrels flat fish, 48 barrels squids.

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NOTE—Pounds Nos. 76, 118, 124, and 77 were not set.

French Brothers, East Lyme, (Niantic P. O.)

Pound No. 32—Snow's Point.

Pound No. 116—Snow's Point west Hatchett's Reef.

Pound No. 122—Off Little Bay.

Pound No. 123—Off Stony Shoal.

Fish Caught—29 shad, 4 barrels black fish, 34 barrels weak fish, 1 barrel butter fish, 7 barrels flukes, 29 barrels flat fish, 30 barrels alewives.

James M. Raymond, East Lyme, (Niantic P. O.)

Pound No. 19—North side Niantic Point.

Pound No. 23—Off Blood Point.

Pound No. 33—Off Champion Point.

Pound No. 34—Off Champion Point.

Pound No. 91—South Wigwam Rock.

Pound No. 100—Off Blood Point.

Pound No. 101—South Wigwam Rock.

Fish Caught—1,375 black fish, 3,375 weak fish,  $2\frac{1}{2}$  barrels butter fish, 24 barrels flukes, 19 barrels flat fish,  $\frac{1}{2}$  barrel squids, 2,225 alewives, 150 porgies.

A. C. Saunders, East Lyme, (Niantic P. O.)

Pound No. 103—Off Bush Point.

Fish Caught—314 black fish, 140 weak fish, 25 flukes, 3 eels, 12 alewives, 23 flat fish, 33 mixed fish (including white perch, hake, and porgies).

D. C. Dibble, Westbrook.

Pound No. 58—Lewis Bay, west fishery.

Fish Caught—186 shad, 59 black fish, 154 butter fish, 51 flukes, 1,390 alewives, 2,943 pounds flat fish, 1 striped bass.

E. W. Cook, East Lyme, (Niantic P. O.)

Pound No. 8—West side fish works.

Pound No. 90—Off Long Ledge.

Fish Caught—6 shad, 111 black fish, 471 weak fish, 1,500 butter fish, 229 flukes, 200 alewives, 38 flat fish, 1,100 squids, 1,140 herring, 2 blue fish.

C. A. Sherman, East Lyme, (Niantic P. O.)

Pound No. 24—Off Stone Heap, Bond property.

Pound No. 54—West side Black Point, near Bacon's cottage.

Fish Caught—12 shad, 7 barrels black fish, 23 barrels weak fish,  $2\frac{1}{2}$  barrels butter fish,  $11\frac{1}{2}$  barrels flukes, 8 barrels alewives, 1 barrel flat fish,  $7\frac{1}{2}$  barrels squids, 3 barrels lobsters.

NOTE. Pound 54 not set.

C. W. Beckwith, East Lyme, (Niantic P. O.)

Pound No. 75—West side Black Point Bay.

Fish Caught—10 shad, 250 black fish, 550 weak fish, 30 pounds butter fish, 345 flukes, 31 eels, 500 alewives, 315 pounds flat fish, 1 striped bass, 315 pounds mixed fish.

L. A. Champion, Black Hall.

Pound No. 102—Stony Point, off Howard's land.

Fish Caught—181 weak fish, 4,404 pounds black fish.

James P. Clark, East Lyme, (Niantic P. O.)

Pound No. 20—Off Millstone Point, Waterford.

Pound No. 21—Southeast Goose Island.

Pound No. 23—Robert Payne's shore.

Pound No. 25—Boundary line of Payne farm.

Pound No. 41—Off Crescent Beach.

Pound No. 42—Off Robert Payne's farm.

Pound No. 57—West side Millstone Point.

Fish Caught—70 shad, 218 black fish, 12 barrels black fish, 34 sea bass, 2,104 weak fish, 2 barrels weak fish, 29 blue fish, 197 butter fish, 2 barrels butter fish, 37 barrels flukes, 18 eels, 287 flat fish, 2 barrels flat fish, 52 barrels squids, 3 barrels porgies.

A. L. Sherman, East Lyme, (Niantic P. O.)

Pound No. 28—West side Black Point.

Pound No. 29—West side Luce fishworks.

Pound No. 30—Off Beckwith Neck.

Pound No. 31—Off Hatchett's Point.

Fish Caught—19 shad, 1 barrel black fish, 27 barrels weak fish, 9 barrels sturgeon, 7 barrels flukes, 53 barrels alewives, 11 barrels flat fish, 2 barrels squids.

E. W. Champion, Black Hall.

Pound No. 105—North Champion Point.

Fish Caught—166 weak fish, 70 flukes, 4,650 pounds flat fish.

George C. Ingham, Saybrook.

Pound No. 71—Guard House Point.

Fish Caught—1,036 shad.

John F. Bushnell, Old Saybrook.

Pound No. 73—Next west Lighthouse.

Pound No. 74—Second west Lighthouse.

Fish Caught—2,200 shad, 50 striped bass, 75 blue fish, 500 flukes, 1,000 flat fish, 30,000 alewives.



A. B. Dibble Bros., Westbrook.

Pound No. 112—East of Clinton.

Fish Caught—106 shad, 65 black fish, 17 weak fish, 1,764 butter fish, 3,130 flat fish, 1,003 flukes, 20,695 alewives, 30 striped bass.

Albert Dibble, Westbrook.

Pound No. 131—In Westbrook Bay.

Fish Caught—1,550 pounds weak fish, 30 pounds striped bass, 950 pounds flukes, 1,230 pounds butter fish, 250 pounds black fish, 10 pounds Spanish mackerel.

W. M. Crawford, Clinton.

Pound No. 107—Location not given.

Pound No. 109—Sand's Point.

Fish Caught—65 shad, 27 butter fish, 15 weak fish, 420 black fish, 46 flukes, 2,700 alewives, 4,105 pounds flat fish.

Dowd & Redfield, Madison.

Pound No. 36—In Bay of west wharf.

Pound No. 37—In Bay of west wharf.

Fish Caught—344 shad, 98 black fish, 15 sea bass, 2,695 weak fish, 785 pounds butter fish, 6 sturgeon, 10 barrels alewives, 15 barrels flat fish, very few flukes and flounders.

R. E. Bassett, Madison.

Pound No. 94—East River, west pound on Madison line.

Fish Caught—37 shad, 72 black fish, 190 weak fish, 91 flukes, 1 bushel butter fish.

Frederic W. Williams, Madison.

Pound No. 129—Off east wharf.

Pound No. 30—Inside of pound No. 129.

Fish Caught—93 shad, 29 black fish, 105 weak fish, 1,172 butter fish, 54 flukes, 3 sturgeon, 1,265,000 bony fish, 4 sea bass, 3 blue fish.

E. B. Field, East River.

Pound No. 95—Western boundary line of Madison.

Fish Caught—120 shad, 400 pounds black fish, 500 pounds weak fish, 300 pounds butter fish, 75 pounds flat fish.

Ralph B. Hill, Guilford.

Pound No. 88—South Guilford.

Pound No. 104—Three-eighths of a mile south Guilford Point house.

Fish Caught—76 shad, 20 black fish, 40 weak fish, 3,695 flat fish.

Reuben E. Hill, Guilford.

Pound No. 93—One-half mile southeast Guilford Point.

Fish Caught—4 shad, 152 weak fish, 95 flat fish.

Clark & Burns, Milford.

Pound No. 132.

Fish Caught—177 shad, 105 black fish, 331 weak fish, 315 flukes, 628 eels, 2,206 flat fish.

## E. R. Kelsey, Branford.

Pound No. 81—Off Cow and Calf Rocks.

Pound No. 82—Off Darrow's Island.

Pound No. 83—Off Guinon Reef.

Fish Caught—446 shad, 479 pounds black fish, 714 pounds weak fish, 283 pounds flat fish, 8 bushels alewives.

NOTE. Pounds Nos. 82 and 83 not set.

## J. McLean and A. P. Foote, Stony Creek.

Pound No. 59—Rogers Island, west of Thimble Island.

Fish Caught—101 shad, 5 striped bass, 94 black fish, 83 weak fish, 38 butter fish, 799 flat fish, 54 flukes, 124 eels, 5,950 alewives, 1 mullet, 12 lamprey eels.

## Albert B. Dowd, Stony Creek.

Pound No. 96—South of Little Island, Branford.

Pound No. 97—South of Little Island, Branford.

Fish Caught—106 shad, 293 pounds black fish, 596 pounds weak fish, 274 pounds butter fish, 209 pounds flukes, 3,141 pounds flat fish, 1,247 alewives.

## T. D. Babcock, Westerly, R. I.

Pound No. 61—At Narrows, Pawtucket River.

Pound No. 63—Rhodes Folly, Pawtucket Bay.

Not fished until fall.

## C. W. Cook, Niantic.

Pounds Nos. 9, 27, 80, and 90.

Pound No. 80—In Niantic Bay, east Luce's fish works.

Not fished.

## E. P. Clark, Stonington.

Pound No. 85—West end Railroad bridge.

Pound No. 87—Watering place fence, west side.

Not fished until after June 25th.

## J. V. Luce, Niantic.

Pound No. 106—Mouth Brides Creek.

Not set at all.

## E. E. Gates, Niantic.

Pound No. 113—East Wigwam Reef.

Pound No. 114—Mouth of Black Point Creek.

Not set.

## C. H. Eccleston, Jr., Mystic.

Pound No. 119—Mason Island, west end.

Not used.

## C. W. Beckwith, Niantic.

Pound No. 127—Near south part lower pound of Cruttenden.

Not set.

5,302 shad taken in pounds in 1896.



## PERMITS GRANTED

(BY OLD BOARD OF FISH COMMISSIONERS) FOR THE USE OF TWO  
AND ONE-HALF INCH MESH NETS, AND CATCH OF 1895.

No. 1—Aaron Smith, Warehouse Point.

Fish Caught—1 shad, 419 dozen alewives, 10 pounds pickerel, 50 pounds perch.

No. 2—George Perkins, Wethersfield.

Did not fish.

No. 3—Daniel L. Tallcott, Glastonbury.

Fish Caught—415 dozen alewives, 10 pounds pickerel, 50 pounds suckers, 1 sturgeon.

No. 4—J. W. White, Warehouse Point.

Fish Caught—96 alewives, 10 pounds suckers.

No. 5—Alvin F. Taylor, Gildersleeve.

Fish Caught—11,525 alewives.

No. 6—Fox Brothers, Glastonbury, (Naubuc P. O.)

Fish Caught—21 shad, 195 barrels alewives, 833 dozen alewives (fresh), 2 small shad.

No. 7—A. Twillcott & Sons, Glastonbury, (Naubuc P. O.)

Fish Caught—4 shad, 100,000 alewives, 500 perch, 700 bullheads, 10 pickerel, 300 suckers.

No. 8—Charles E. Billings, Hartford.

Did not fish.

No. 9—Leander H. Taylor, Cromwell.

Removed from State after season closed. No report.

No. 10—James H. Frazier, Cromwell.

Fish Caught—22,500 alewives.

No. 11—Jabez L. Woodbridge, warden Conn. State Prison, Wethersfield.

Fish Caught—7,633 alewives.

No. 12—H. L. Taylor, Middletown.

Did not fish.

No. 13—E. S. Olcott, Glastonbury, (Naubuc P. O.)

Fish Caught—5 shad, 1,200 alewives.

No. 14—

No. 15—Arthur Thresher, Hartford.

Fish Caught—115 barrels alewives, 3,015 dozen alewives (fresh), 28 pounds pickerel, 840 pounds suckers, 223 pounds bullheads, 420 pounds perch, 1 small shad.

- No. 20—William E. Smith, Hartford.  
Fish Caught—3,000 dozen alewives.
- No. 23—Samuel P. Anderson, Lyme, (Hamburgh P. O.)  
Fish Caught—400 alewives, 900 perch, 100 pickerel, 350 suckers..
- No. 24—Henry C. Douglass, Windsor Locks.  
Did not fish.
- No. 25—Poquonock Shad Fishing Co., Windsor.  
Did not fish.
- No. 26—Winthrop Buck, Wethersfield.  
Fish Caught—20 shad, 15,000 dozen alewives.
- No. 27—J. E. Loret, Middletown.  
Did not fish.
- No. 31—Charles Smith, Cromwell.  
Fish Caught—None between April 15th and June 25th.
- No. 32—Charles Arden Whaples, Cromwell.  
Fish Caught—6 shad, 15,800 alewives, 4 bushels suckers.
- No. 33—W. H. Cotton and A. C. Smith, Cromwell.  
Fish Caught—20,500 alewives.
- No. 34—James P. Kidder, Moodus.  
Fish Caught—95 alewives, 1 bullhead, 2 pickerel, 20 suckers..
- No. 35—John F. Walker, Portland.  
Fish Caught—7,925 alewives.
- No. 36—E. W. Button, Cromwell.  
No report.
- No. 37—William L. Frazier, Cromwell.  
Fish Caught—11 shad, 62 dozen alewives, 19 bushels suckers.
- No. 38—William McCabe, Hartford.  
No report.
- No. 39—Leavenworth & Birden, Hartford.  
Fish Caught—125 dozen alewives, 15 pounds bullheads, 15 suckers.
- No. 40—Edwin A. Judson, East Hartford, (Silver Lane P. O.)  
Fish Caught—12 shad, 4,675 alewives, 35 bullheads, 53 suckers.
- No. 41—Henry E. Spencer, Higganum.  
No report.
- No. 42—Charles Ohlson, Portland.  
Fish Caught—82 dozen alewives, 25 pounds bullheads, 14 pounds pick-  
erel, 50 pounds perch, 250 suckers. .
- No. 46—E. F. Markham, Portland.  
Fish Caught—3,400 alewives, 50 perch, 50 bullheads, 350 suckers.

- No. 47—W. H. Arnold, Haddam, (Shailerville P. O.)  
No. 57—N. Daniels, Haddam, (Shailerville P. O.)  
No. 58—W. Hall, Haddam, (Shailerville P. O.)  
No. 59—H. C. Brainard, Haddam, (Shailerville P. O.)  
Fish Caught—37,625 alewives.
- No. 48—Chalker & Crittenden, Higganum.  
No report.
- No. 49—Elliott W. Ely, Lyme, (Hamburgh P. O.)  
Fish Caught—119 barrels alewives, 41 bushels fresh water fish.
- No. 50—Charles A. Church, Higganum.  
No report.
- No. 52—F. D. Waterhouse, Haddam, (Tylerville P. O.)  
Fish Caught—15,000 alewives.
- No. 53—Charles H. Hanmer, Wethersfield.  
Fish Caught—10 shad, 4,892 dozen alewives, 248 barrels alewives, 2,000 pounds small fish, 500 pounds perch, 50 bullheads, 5 pickerel, 1,500 pounds suckers.
- No. 54—Fred and Charles Smith, Cromwell.  
Fish Caught—30,000 alewives, 3½ bushels perch, 1 bushel bullheads, 6 bushels suckers.
- No. 55—William Keehner, Hartford.  
Did not fish.
- No. 56—George C. Francis, Chester.  
Fish Caught—5 shad, 35 barrels alewives.
- No. 60—C. G. Brainard, Higganum.  
No report.
- No. 61—J. Midgett, Higganum.  
Fish Caught—250 alewives.
- No. 62—J. E. Fish, Warehouse Point.  
Fish Caught—150 alewives, 100 suckers.
- No. 63—James H. McCabe, Hartford.  
No report.
- No. 64—E. F. Belden, Rocky Hill.  
Did not fish.
- No. 65—O. I. Bailey, Higganum.  
No report.
- No. 66—John Harrigan, Hartford.  
Removed. No report.
- No. 67—E. J. Bright, Moodus.  
Fish Caught—10,000 alewives.

## PERMITS GRANTED

FOR THE USE OF TWO AND ONE-HALF INCH MESH NETS, AND  
CATCH OF 1896.

- No. 1—W. H. Cotton and A. C. Smith, Cromwell.  
Fish Caught—60 shad, 20,100 alewives.
- No. 2—James Frazier, Cromwell.  
Fish Caught—25,750 alewives, 567 perch, 75 bullheads, 1,975 suckers.
- No. 3—William L. Frazier, Cromwell.  
Fish Caught—5 shad, 5,860 alewives, 143 suckers.
- No. 4—C. A. Whaples, Cromwell.  
Fish Caught—41,000 alewives, 25 perch, 50 bullheads, 375 suckers.
- No. 5—Charles Ohlson, Portland.  
Fish Caught—800 alewives, 50 perch.
- No. 6—Alvin F. Taylor, Cromwell.  
Fish Caught—10 shad, 25,633 alewives, 50 other edible fish.
- No. 7—Fox Bros., East Hartford.  
Fish Caught—100,280 alewives, 1 German carp.
- No. 8—Charles H. Hanmer, Wethersfield.  
Fish Caught—320 barrels salt alewives, 10,500 fresh alewives, 200 pounds perch, 25 pounds bullheads, 10 pounds pickerel, 3,000 pounds suckers, 2 German carp.
- No. 9—Arthur Thresher, Hartford.  
Fish Caught—7,258 dozen alewives fresh, 587 barrels alewives salt, 927 pounds suckers and perch, 274 pounds bullheads dressed, 153 pounds eels dressed, 7 shad, 4 German carp, 1 muskalonge.
- No. 10—Daniel L. Tallcott, Glastonbury.  
Fish Caught—5,700 alewives, 30 perch, 6 pickerel, 24 bullheads, 174 suckers, 18 carp.
- No. 11—John G. Cornwell, Rocky Hill.  
Fish Caught—4,600 alewives, 5,400 suckers.
- No. 12—Edwin F. Markham, Portland.  
Fish Caught—15,400 alewives.
- No. 13—John F. Walker, Portland.  
Fish Caught—40,500 alewives.
- No. 14—Fred and Charles Smith, Cromwell.  
Fish Caught—10,000 alewives, 1 bushel bullheads, 4 bushels perch, 25 pickerel.

No. 15—Edward F. Belden, Rocky Hill.

Fish Caught—14,000 alewives.

No. 16—John F. Bushnell, Old Saybrook, (Pound No. 73.)

Fish Caught—163 shad, 41 hickory shad, 39 barrels alewives, 17,507 alewives, 6 lamprey eels, 44 pounds sea bass.

No. 17—Aaron Smith, Warehouse Point.

Fish Caught—8,900 alewives, 52 pickerel, 50 perch.

No. 18—Henry E. Spencer, Higganum.

Fish Caught—12,000 alewives, 500 perch.

No. 19—Charles A. Clark, Higganum.

Fish Caught—27 alewives.

No. 20—William McCabe, Hartford.

Fish Caught—4 shad, 45,672 alewives, 378 perch, 320 bullheads, 30 pickerel, 32 dace, 3 German carp, 61 roach, 6 rock bass, 351 suckers.

No. 21—George W. Leavenworth, Hartford.

Fish Caught—1,380 alewives, 9 perch, 68 bullheads.

No. 22—William E. Smith, Hartford.

Fish Caught—8,000 to 9,000 dozen alewives, 800 to 1,000 pounds perch, very few bullheads, 150 to 200 pickerel, 1 sturgeon 125 pounds, 1 striped bass 8½ pounds.

No. 23—Newton D. Merwin, Higganum.

Fish Caught—2,145 alewives, 2 perch, 1 pickerel.

No. 24—Charles Smith, Cromwell.

Did not fish.

No. 25—Wilbur L. Hall, Haddam.

Fish Caught—21,700 alewives, 20 perch, 14 pickerel, 29 suckers.

No. 26—George C. Francis, Chester.

Did not fish.

No. 27—Winthrop Buck, Wethersfield.

Fish Caught—4 shad, 6 or 8 small shad, 30,485 dozen alewives.

No. 28—Wilson M. Crawford, Clinton.

Fish Caught—41 shad, 3,400 alewives, 17 blackfish, 5 flounders, 1 weak fish, 3,540 pounds flat fish.

No. 29—Twillcott Brothers, Naubuc.

Fish Caught—4 shad, 150,000 alewives, 50 perch, 200 bullheads, 12 pickerel.

No. 30—Joseph Prior, East Hartford.

Fish Caught—804 alewives, 3 pounds perch, 12 pickerel.

No. 31—D. F. Brown & A. Y. Burgess, East Berlin.

Fish Caught—3,494 alewives, 256 suckers.

No. 32—Elihu S. Olcott, Naubuc.

Fish Caught—10,200 alewives, 10 pounds bullheads, 3 pickerel.

No. 33—Robert and John Bartman, East Haddam.

Fish Caught—20 barrels alewives, 150 perch, 81 pickerel.

No. 34—Ira G. Bailey, Higganum.

Fish Caught—2,000 alewives.

No. 35—Samuel P. Anderson, Lyme, (Hamburgh P. O.)

Fish Caught—19 shad, 1,105 alewives, 18 perch, 3 pickerel, 24 suckers.

No. 36—F. D. Waterhouse, Haddam, (Tylerville P. O.)

Fish Caught—14,500 alewives.

No. 37—Edmund D. Bailey, Haddam, (Higganum P. O.)

Fish Caught—940 alewives.

No. 38—Henry C. Douglass, Windsor Locks.

Did not fish.

No. 39—Poquonock Shad Fishing Company, Windsor.

Did not fish.

No. 40—Jabez L. Woodbridge, Warden State Prison, Wethersfield.

Fish Caught—1 large shad, 3 small shad, 20,554 alewives.

No. 41—Edwin F. Judson, East Hartford.

Fish Caught—4, shad, 3,120 alewives.

In 1896 this Commission granted permits only to persons owning or leasing fishing rights.



## SHAD CATCH.

## CONNECTICUT RIVER, 1895.

Samuel Sizer, Old Saybrook, gill net.....	999
Benjamin C. Clark, Jr., Old Saybrook, gill net.....	1,140
William Flint, Lyme, gill net.....	628
William Bates, Lyme, gill net.....	548
A. Chittenden, Lyme, gill net.....	968
C. V. Miller, Lyme, gill net.....	1,513
Henry Huntley, Lyme (Hamburgh, P. O.), gill net.....	916
Frank N. Hall, Lyme (Hamburgh P. O.), gill net.....	459
George M. Warner, Lyme (Hamburgh P. O.), gill net.....	227
Samuel M. Beckwith, Lyme (Hamburgh P. O.), gill net.....	559
O. S. Comstock, Essex, gill net.....	882
James M. Miller, Lyme (Brockway P. O.), gill net.....	826
Jared S. Daniels, Lyme (Brockway P. O.), gill net.....	900
Herbert E. Banning, Lyme (Brockway P. O.), gill net.....	1,192
William E. Anderson, Lyme (Brockway P. O.), gill net.....	365
Nathan B. Damon, Lyme (Brockway P. O.), gill net.....	734
H. S. Buckingham, Saybrook (Deep River P. O.), gill net.....	1,500
John Moseley, Chester, gill net.....	614
George C. Francis, Chester, gill net.....	707
Ed. Simpson, Lyme (Hadlyme P. O.), gill net.....	500
B. B. Collins, Lyme (Hadlyme P. O.), gill net.....	615
Ernest M. Phelps, Lyme (Hadlyme P. O.), gill net.....	390
John Bartman, Lyme (Hadlyme P. O.), gill net.....	315
Joseph N. Ely, Lyme (Hadlyme P. O.), gill net.....	1,532
E. J. Bright, East Haddam, gill net.....	561
George E. Russell, Haddam, gill net.....	80
D. E. Dingwell, Higganum, gill net.....	530
Frank Crittenden & Son, Higganum, gill net.....	461
H. C. May, Higganum, gill net.....	570
W. E. Mitchell, Higganum, gill net.....	80
Ira G. Bailey, Higganum, gill net.....	359
Fred. Chalker and Henry E. Spencer, Higganum, gill net.....	1,004
Franklin O. Tyler, Haddam (Shailerville P. O.), gill net.....	1,233
John O. Brainard, Haddam (Shailerville P. O.), gill net.....	969
T. M. Cavanaugh, Middle Haddam, gill net.....	997
James H. Frazier, Cromwell, hauling seine.....	475
William E. Smith, Hartford, hauling seine.....	718
Cotton & Smith, Cromwell, hauling seine.....	99
T. D. Waterhouse, Tylerville, gill net.....	674
Alvin F. Taylor, Gildersleeve, hauling seine.....	51
Edward F. Belden, Rocky Hill, gill net.....	233
S. Hale & Son, Wethersfield, hauling seine.....	729
Elliott W. Ely, Lyme (Hadlyme P. O.), hauling seine.....	4,314
W. H. Arnold, Haddam (Shailerville P. O.), gill net.....	1,166
Total.....	34,323

## SHAD CATCH.

## CONNECTICUT RIVER, 1896.

Charles Williams, Old Saybrook, gill net.....	390
Samuel Sizer, Old Saybrook, gill net.....	903
Benjamin C. Clark, Jr., Old Saybrook, gill net....	1,130
Charles V. Miller, Lyme, gill net .....	1,610
A. P. Crittenden, Westbrook, gill net.....	1,379
William Flint, Lyme, gill net.....	447
Jared S. Daniels, Lyme (Hamburgh P. O.), gill net....	1,648
C. Frank Hall, Lyme (Hamburgh P. O.), gill net.....	2,103
Henry Huntley & Newton Hall, Lyme (Hamburg P. O.), gill net	1,020
S. H. & I. M. Beckwith, Lyme (Hamburgh P. O.), gill net.....	852
George M. Warren, Lyme (Hamburgh P. O.), gill net.....	724
O. S. Comstock & E. Saunders, Essex, gill net....	729
Herbert E. Banning Lyme (Brockway P. O.), gill net.....	1,836
Nathan B. Damon, Lyme (Brockway P. O.), gill net.....	835
Herbert S. Buckingham, Saybrook (Deep River P. O.), gill net.	1,875
B. B. Collins & Charles E. Lund, Chester, gill net.....	898
Joseph N. Ely, Lyme (Hadlyme P. O.), gill net.....	2,035
John & Robert Bartman, East Haddam, gill net.....	1,440
D. E. Dingwell, Saybrook, gill net.....	1,132
George C. Francis, Chester, gill net.....	955
Lewis Powers, East Haddam, gill net .....	1,609
Chalker, Burr & Neff, Higganum, gill net.....	150
Newton D. Merwin, Higganum, gill net.....	150
W. H. Arnold & D. C. Brainard, Shailerville, gill net.....	2,118
F. P. Crittenden & Son, Haddam, gill net .....	1,422
H. E. May, Haddam (Higganum P. O.), gill net .....	1,116
Ira G. Bailey & William H. Goff, Haddam (Higganum P. O.), gill net.....	464
F. O. Tyler, Haddam, gill net.....	1,831
Allen F. Graves, Haddam, gill net.....	309
Henry T. Smith, Haddam, gill net.....	942
F. D. Waterhouse, Haddam, gill net.....	1,617
J. E. Shailor, Haddam, gill net.....	200
S. Hale & Son, Wethersfield, hauling seine.....	2,779
William E. Smith, Hartford, hauling seine.....	1,511
H. H. Clark, Haddam (Goodspeeds P. O.), gill net.....	1,187
Elliott W. Ely, Lyme (Hadlyme P. O.), drag net.....	2,269
Edward F. Belden, Rocky Hill, gill net.....	585
Henry E. Spencer, Higganum, gill net.....	1,080
John O. Brainard, Haddam, gill net .....	1,017
James Frazier, Cromwell, hauling seine.....	272
D. F. Brown & A. Y. Burgess, East Berlin, hauling seine .....	110
Wilbur L. Hall, Haddam (Shailerville P. O.), gill net.....	75
Fred & Charles Smith, Cromwell, hauling seine.....	580
Ernest M. Phelps, Lyme (Hadlyme P. O.), gill net.....	208
W. L. Spencer, Higganum, gill net.....	700
Shad caught with 2½ inch mesh nets.....	355
Total.....	48,797

## HOUSATONIC RIVER, 1895.

Theodore H. Clark, Bridgeport, gill net.....	651
John F. Ritchie, Shelton, gill net.....	17
A. W. Burns, Milford, gill net.....	150
Azor Bradley, Stratford, gill net.....	58
James H. Peet, Stratford, 2 gill nets.....	866
S. H. Wells, Stratford, gill net.....	600
George A. Clark, Stratford, gill net.....	*13,376
Jeremiah Parker, Stratford, gill net.....	242
N. W. Clark, Stratford, gill net.....	1,003
Levi Slie & Son, Huntington, gill net.....	752
Charles F. Weed, Stratford (Oronoque P. O.), three gill nets....	695
Charles S. Blackman, Birmingham, gill net.....	368
John Blakeslee, Stratford (Oronoque P. O.), gill net.....	674
John B. Ritchie, Milford, gill net.....	22
E. N. Wakelee, Stratford, gill net and drag net.....	717
H. S. Moulthrop, Birmingham, two gill nets.....	616
State Hatchery, Shelton, hauling seine.....	712
<b>Total.....</b>	<b>21,519</b>

\*NOTE. This catch is doubted.

## HOUSATONIC RIVER, 1896.

Charles F. Weed, Oronoque, 2 gill nets.....	218
J. H. Parker, Milford, gill net.....	134
Levi Slie & Son, Birmingham, seine and gill net.....	488
James H. Peet, Stratford, gill net.....	442
E. N. Wakelee, Stratford, gill net.....	200
S. N. Wells, Stratford, gill net.....	75
N. W. Clark, Stratford, gill net.....	375
A. Bradley, Stratford, gill net.....	21
State Hatchery, Shelton, seine.....	874
Charles S. Blakeslee, Birmingham, gill net.....	392
<b>Total.....</b>	<b>*3,219</b>

\*NOTE. This catch is doubted.

## SUMMARY.

### SHAD CATCH, 1895.

Pounds.....	6,755
Connecticut River.....	34,323
Housatonic River.....	*21,519
Total.....	62,597

### SHAD CATCH, 1896.

Pounds.....	5,302
Connecticut River.....	48,797
Housatonic River.....	*3,219
Total.....	57,318

### SHAD CATCH, HOUSATONIC RIVER.

1893.....	10,558
1894.....	24,732
1895.....	21,519
1896.....	*3,219

### SHAD CATCH, CONNECTICUT RIVER.

1893.....	21,778
1894.....	38,776
1895.....	34,323
1896.....	48,797

### SHAD CAUGHT IN CONNECTICUT FROM 1890 to 1896, INCLUSIVE.

1890.....	34,318
1891.....	22,462
1892.....	18,965
1893.....	41,253
1894.....	31,145
1895.....	62,597
1896.....	57,318

\* NOTE. Catch in doubt

## STATEMENT OF SHAD EGGS TAKEN, ETC., AT SHELTON, FOR HATCHING, 1895.

1895.	Temperature.		Number of Eggs Taken.	Number of Fry Planted.
	Water.	Air.		
May 24	62	66	118,000	.....
25	63	60	200,000	.....
26	64	68	55,000	.....
27	66	67	118,000	150,000
28	67	64	206,000	.....
29	64	68	60,000	140,000
30	66	70	78,000	175,000
31	70	75	105,000	.....
June 1	71	76	208,000	200,000
2	78	85	100,000	240,000
3	80	86	85, 00	.....
4	77	76	190,000	205,000
5	76	68	91,000	.....
6	72	69	.....	.....
7	71	68	125,000	.....
8	71	70	130,000	70,000
9	76	70	90,000	.....
10	72	77	45,000	150,000
11	74	75	90,000	.....
12	76	76	.....	175,000
13	78	76	.....	.....
14	78	80	.....	200,000
15	80	76	.....	175,000
16	78	80	40,000	.....
17	77	76	21,000	.....
18	76	79	30,000	.....
19	76	78	.....	.....
20	78	80	28,000	.....
21	78	80	20,000	60,000
22	78	74	.....	.....
23	78	81	.....	.....
24	79	82	45,000	40,000
25	79	84	.....	.....
26	79	77	28,000	.....
27	78	74	.....	.....
28	73	74	10, 00	.....
29	73	78	.....	45,000
30	72	74	.....	.....
July 1	73	73	.....	.....
2	74	74	.....	.....
3	74	72	.....	40,000
			2,329,000	2,185,000

Roe shad taken..... 251

Buck shad taken..... 461

Total..... 712

GILBERT B. STERLING,  
*Superintendent.*

STATEMENT OF SHAD EGGS TAKEN, ETC., AT POQUONOCK, FOR HATCHING,  
1895.

1895.	Temperature.		Number of Eggs Taken.	Number of Fry Planted.
	Water.	Air.		
June 5	72	76	77,000	.....
6	72	76	20,000	.....
7	72	75	21,000	.....
8	72	68	140,000	.....
9	71	72	7,000	.....
10	73	72	20,000	.....
11	72	76	80,002	42,000
12	72	76	.....	.....
13	76	79	100,000	.....
14	76	82	.....	125,000
15	76	78	.....	.....
16	77	80	.....	.....
17	76	70	105,000	.....
18	76	80	.....	.....
19	76	81	.....	.....
20	76	84	.....	.....
21	76	84	.....	.....
22	77	80	50,000	.....
23	77	86	6,000	100,000
24	77	82	.....	.....
25	76	82	.....	.....
26	77	70	.....	.....
27	76	68	20,000	.....
28	76	68	20,000	.....
29	74	80	.....	.....
30	76	78	35,000	25,000
July 1	76	78	7,000	.....
2	76	78	7,000	.....
3	76	78	50,000	.....
6	76	76	5,000	20,000
7	76	80	35,000	.....
8	76	80	.....	7,000
9	76	82	.....	.....
12	76	82	.....	100,000
			805,000	426,000

Roe shad taken ..... 67

Buck shad taken ..... 91

Total..... 158

NOTE—The shad fry planted were all placed in retaining pond at Poquonock. The loss of eggs was occasioned by not having buck shad at the right time.

JAMES A. STERLING,  
*Superintendent.*



STATEMENT OF SHAD EGGS TAKEN, ETC., AT POQUONOCK, FOR HATCHING,  
1896.

1896.	Temperature.		Number of Eggs Taken.	Fry Planted.
	Water.	Air.		
May 18	65	77	140,000	.....
19	64	70	84,000	.....
20	64	70	16,000	.....
21	60	62	72,000	.....
22	64	70	.....	.....
23	64	70	49,000	.....
24	64	70	77,000	.....
25	60	60	35,000	.....
26	60	74	45,000	.....
27	60	70	5,000	.....
28	60	76	.....	.....
29	62	74	.....	60,000
30	62	76	.....	75,000
31	62	76	.....	75,000
June 1	62	68	15,000	125,000
2	62	78	5,000	.....
3	64	82	182,000	110,000
4	65	90	49,000	.....
5	65	85	21,000	50,000
6	65	68	100,000	25,000
7	64	63	35,000	.....
8	64	85	98,000	.....
9	63	64	7,000	25,000
10	63	65	8,000	.....
11	63	70	.....	.....
12	64	75	35,000	.....
13	63	60	65,000	.....
14	60	70	35,000	75,000
15	62	76	.....	50,000
16	60	64	.....	.....
17	64	79	.....	50,000
18	64	85	77,000	.....
19	66	90	10,000	50,000
20	66	92	12,000	125,000
21	68	80	84,000	.....
22	68	79	56,000	35,000
23	67	78	90,000	105,000
24	67	76	22,000	50,000
25	64	76	.....	.....
26	64	82	16,000	35,000
27	64	69	.....	50,000
28	68	80	.....	35,000
29	68	74	.....	85,000
30	68	78	.....	78,000
July 1	68	85	.....	53,000
			1,543,000	1,351,000

Number Roe Shad Taken.....205  
Number Buck Shad Taken.....278  
Total.....483

JAMES A. STERLING, *Superintendent.*

## STATEMENT OF SHAD EGGS TAKEN, ETC., AT SHELTON, FOR HATCHING, 1896.

1896.	Temperature.		Eggs Taken.	Fry Planted.
	Water.	Air.		
May 9	65	70	.....	.....
10	67	72	35,000	.....
11	68	73	.....	.....
12	71	74	28,000	.....
13	71	66	.....	.....
14	70	76	25,000	.....
15	70	72	60,000	.....
16	71	74	20,000	.....
17	72	73	85,000	.....
18	72	80	18,000	90,000
19	72	78	80,000	80,000
20	70	74	.....	.....
21	70	74	.....	.....
22	65	68	30,000	.....
23	67	74	25,000	35,000
24	65	70	65,000	.....
25	66	72	.....	40,000
26	65	69	90,000	50,000
27	68	73	85,000	.....
28	67	70	100,000	35,000
29	69	72	.....	.....
30	69	74	14,000	.....
31	68	72	40,000	.....
June 1	68	73	100,000	100,000
2	67	71	110,000	.....
3	69	75	115,000	100,000
4	68	78	190,000	.....
5	70	78	98,000	50,000
6	70	79	85,000	150,000
7	68	73	45,000	.....
8	72	72	112,000	71,000
9	69	78	440,000	.....
10	71	70	135,000	.....
11	70	68	250,000	140,000
12	70	70	205,000	.....
13	68	73	145,000	150,000
14	67	65	84,000	.....
15	66	69	85,000	280,000
16	66	71	...	150,000
17	65	68	40,000	.....
18	66	73	170,000	175,000
19	69	78	38,000	.....
20	70	81	140,000	200,000
21	71	86	205,000	.....
22	71	84	195,000	190,000
23	72	80	105,000	.....
24	76	81	195,000	200,000
25	73	70	215,000	175,000
26	70	73	212,000	190,000
27	70	75	115,000	.....
28	72	74	165,000	185,000
29	72	78	.....	130,000
30	70	73	35,000	200,000
July 1	72	76	.....	190,000
2	74	80	.....	250,000
3	76	80	.....	200,000
			4,589,000	4,105,000

Number Roe Shad Taken.....440

Number Buck Shad Taken.....434

Total.....874

GILBERT B. STERLING, *Superintendent.*

## MR. FOLLETT'S REPORT:

"Copy."

"TROUT FRY GIVEN TO THE FOLLOWING  
APPLICANTS, SPRING OF 1895.

---

" Charles Ford, Falls Village .....	50,000
" Charles Kelsey, Lakeville .....	50,000
" John Belcher, Lime Rock .....	50,000
" L. Nickerson, Cornwall .....	50,000
" Samuel Eddy, Canaan .....	50,000
" D. E. Soule, New Milford .....	50,000
" George E. Gager, Sharon .....	30,000
" M. J. Houlihan, Newtown .....	50,000
" E. B. Clark, Milford .....	84,000
" H. C. Douglass, Windsor Locks .....	30,000
" F. E. Fengee, New London .....	35,000
" Samuel Elmore, Hartford .....	10,000
" W. H. Bruce, Hartford .....	8,000
" C. H. Webster, (no address given) .....	5,000
" G. A. Hopson, Meriden .....	15,000
" S. F. Bronson, Meriden .....	10,000
" Samuel Kirby, New Haven .....	10,000
" Edward Malley, New Haven .....	5,000
" C. H. Brown, Wallingford .....	6,000
	<hr/>
	598,000 "

This report of Mr. Follett's is noted for its brevity. The delivery of these fish was made before this Commission was formed. Two thousand brook trout fry is usually allotted to each applicant, unless there are a large number of applicants in the town ; then the number is reduced.

## APPLICANTS FOR BROOK TROUT FRY, AND FURNISHED, SEASON OF 1896.

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Leverett M. White, North Granby	Hon. Charles Coffey, Granby
Condit Messenger, North Granby	George S. Godard, North Granby
Nathan A. Tuttle, Torrington	Hurlburt J. Beaman, West Granby
F. O. Hills, Torrington	James A. Fancher, West Granby
A. P. Hine, Torrington	Porter M. Reed, West Granby
F. W. Butler, Torrington	Hon. Columbus Reed, West Granby
Walter S. Fyler, West Torrington	Frank C. Scholfield, Oakdale
George Drake, West Torrington	S. M. Crocker, New London
Jefferson R. Holcomb, East Granby	Henry C. Hull, Clinton
C. T. Georgia, Unionville	Elbert A. Hurd, Clinton
Willis W. Mildrum, East Berlin	W. L. Keeler, North Wilton
Fred M. Godard, Tariffville	Thomas Rea, New Canaan
Fred Hubbard, East Berlin	John F. Bliss, New Canaan
Ernest W. Mildrum, East Berlin	George E. Banzhaf, New Canaan
J. O. Hall, Wallingford	David H. Lockwood, New Canaan
H. L. Hirons, Wallingford	Hon. Benj. P. Mead, New Canaan
James Madison, East Wallingford	Hiram Davis, New Canaan
Robert D. Daley, New Haven	Lucius M. Monroe, New Canaan
W. H. Bruce, Hartford	Charles W. Barlow, New Canaan
John P. Stevenson, East Wallingford	William Wardwell, New Canaan
George D. Morrison, Wallingford	Henry H. Perry, Southport
A. H. Mathewson, Thompsonville.	E. C. Sherwood, Southport
J. H. Frew, Thompsonville	Winthrop Rockwell, Ridgefield
A. S. Howe, Windsor	Louis L. Vaiden, Ridgefield
Geo. T. Mathewson, Thompsonville	Charles S. Nash, Ridgefield
George E. Homer, Somersville	Nathan L. Rockwell, Ridgefield
Charles F. Tuttle, New Haven	Aaron G. Hoyt, Ridgefield
Oliver E. Lapham, New Haven	F. C. Lee, Ridgefield
Almer I. Martin, Wallingford	C. H. Stevens, Ridgefield
Robert Parker, North Granby	L. C. Seymour, Ridgefield
Louis Beeman, Avon	John H. Finch, Ridgefield
L. B. Neal, Southington	William C. Barhite, Ridgefield
W. A. Hitchcock, Unionville	Charles K. Pomeroy, Danbury
A. T. Trowbridge, Willimantic	Thomas F. Hefferan, Danbury
Alfred L. Hayes, West Granby	T. S. Durant, Danbury
E. W. Hazard, Southington	Hon. Lewis E. Orton, Danbury
Garrett W. Smith, Southington	H. D. Bradley, Danbury
J. F. Pratt, Southington	Patrick F. Dunn, Danbury
E. Nichols, Southington	Alfred N. Wildman, Danbury

Hon. Henry Bernd, Danbury	Octave Rivers, Collinsville
Martin H. Griffing, Danbury	Lawrence W. Derrin, Collinsville
G. Fred Lyon, Danbury	John A. Jenkins, Collinsville
James S. Whitehead, Danbury	Frank E. Conlon, Collinsville
William Gordon, Danbury	A. C. Ladd, Jewett City
Daniel E. Jerome, Danbury	Hon. John N. Lewis, Voluntown
H. H. Wildman, New Fairfield	J. E. Phillips, Jewett City
George W. Lewis, New Haven	A. A. Young, Jr., Jewett City
William M. Atwater, New Haven	P. B. Driscoll, Jewett City
George A. Maycock, New Haven	C. W. Reynolds, Jewett City
Fred G. Crabb, New Haven	George A. Ross, Jewett City
Robert Daley, New Haven	J. H. Finn, Jewett City
Enos S. Kimberly, New Haven	W. H. Tift, Jewett City
David H. Clark, New Haven	Archie McNicol, Jewett City
Samuel H. Kirby, New Haven	George G. Young, Jewett City
Dr. H. A. Shelton, New Haven	Ed. Whiting, Jewett City
Charles F. Tuttle, New Haven	Joseph Rood, Jewett City
George W. Lewis, New Haven	George Ayer, Jewett City
Frank Hungerford, Sherman	T. Henry Reed, Jewett City
George A. Barnes, Sherman	Henry McKusker, Jewett City
Hon. M. J. Houlihan, Newtown	F. S. Brown, Jewett City
William H. Glover, Newtown	D. P. Chabott, Jewett City
Hon. W. Sidney Downs, Derby	A. G. Brewster, Jr., Jewett City
Hon. S. A. Blackman, Hawleyville	W. L. Sweet, Jewett City
Hawley B. Jennings, Hawleyville	L. F. Kinney, Jewett City
Edward Ives, Botsford	Ira F. Lewis, Jewett City
William Morch, Botsford	Elias S. Reynolds, Ridgefield
Stephen B. Hayes, Stepney	Hiram J. Kellogg, Ridgefield
Frederick Feller, Bridgeport	G. E. Matthies, Seymour
Daniel J. Carrington, Beacon Falls	Charles H. Guild, Seymour
Mrs. M. B. Humiston, Beacon Falls	C. F. Wedge, Seymour
William E. Parmaley, Beacon Falls	Edward E. Smith, Derby
Herbert C. Baldwin, Beacon Falls	S. D. Lockwood, Derby
John H. Benham, Beacon Falls	C. W. Dick, Seymour
Alfred C. Baldwin, Beacon Falls	James Maybury, Seymour
Frederick H. Brown, New Haven	L. T. Wooster, Seymour
Edward D. Fowler, New Haven	C. T. Baldwin, M. D., Derby
William H. Perry, New Haven	Bruce N. Griffing, Shelton
Frank C. Squires, New Haven	William Holmes, Shelton
Frank A. Evarts, New Haven	Wesley L. Clark, Shelton
Myron R. Durham, New Haven	J. Ambrose Butler, Shelton
Walter M. Reed, Collinsville	C. B. Nettleton, M. D., Derby
Hon. H. L. Sanborn, Collinsville	A. B. Williams, Shelton
James S. Smith, Collinsville	Jerome B. Baldwin, Willimantic
W. B. Case, Collinsville	Col. J. D. Chaffee, Willimantic
W. Burns, Collinsville	Orrin W. Smith, Westford
C. E. Barnes, Collinsville	Ernest James, Warrenville
Melvin Barnes, New Hartford	O. S. Chaffee, Willimantic

George K. Nason, Willimantic	Porter B. Godard, North Granby
H. C. Lathrop, Willimantic	William Broughton, North Granby
F. C. Bissell, Willimantic	L. J. P. Ladd, Jewett City
Winfield S. Crane, Willimantic	M. Wallace, Naugatuck
Fred. M. Barrows, Willimantic	A. H. Dayton, Naugatuck
J. E. Sullivan, Willimantic	C. M. O'Brien, Naugatuck
L. V. Jewett, Willimantic	John Tuttle, Naugatuck
George O. Balch, Warrenville	M. Sherman, Naugatuck
J. S. Macfarlane, Mansfield Centre	James White, Naugatuck
H. L. Metcalfe, Willimantic	F. H. Twitchell, Naugatuck
Charles Fenton, Willimantic	Nathan Burns, Naugatuck
John D. Bently, Willimantic	Hon. W. H. McCarty, Naugatuck
H. C. Norris, Willimantic	Charles W. Harris, Middletown
J. E. Brick, Willimantic	Hon. C. R. Marvin, Deep River
F. C. Moulton, Willimantic	LeGrand B. Cannon, Westport
M. J. Phillips, Willimantic	Edward M. Lees, Westport
H. A. Sanderson, Willimantic	Cornelius B. Kemper, Westport
Irad W. Storrs, Willimantic	S. B. Wheeler, Westport
Frank S. Martin, Willimantic	Henry Tate, Bridgeport
Henry L. Bunce, Hartford	James Gilmore, Bridgeport
Edgar Green, Merrow	J. C. Chamberlain, Bridgeport
D. E. Potter, Willimantic	Frederick N. Manross, Forestville
J. Henry Roraback, Canaan	Junius Zell Douglas, Forestville
E. P. Curtiss, Hartford	Fred Stancliff, Portland
C. O. Hotchkiss, Higganum	Gilbert Stancliff, Portland
John C. Reeves, Gildersleeve	Joseph Clark, Portland
Hon. S. A. Robinson, Middletown	Charles H. Bell, Portland
Edward T. Jackson, Middletown	Fred S. Stancliff, Portland
John M. Taylor, Hartford	Thomas P. Bill, Portland
George H. Prior, Middletown	Lewis C. Rhoades, Canaan
David S. Minor, Middletown	J. H. Roraback, Canaan
George J. Prior, Middletown	DeWitt C. Stevens, Forestville
L. J. Taylor, South Glastonbury	Henry W. Porter, Forestville
Willis O. Carrier, Middletown	Charles H. Deming, Forestville
Albert N. Brainerd, Higganum	Ralph H. Wooster, Forestville
J. W. Pray, South Glastonbury	Frank S. Stevens, Canaan
W. B. Maxon, Portland	Warren D. Mead, Collinsville
Earl Mathewson, Durham	W. L. Derrin, Collinsville
Henry Page, Durham	C. H. Smith, Collinsville
J. Allen Butler, Portland	Stephen J. Lyon, Collinsville
Herbert Orrin Daniels, Middletown	Ursinus O. Mohr, Georgetown
James Longworth, Middletown	Charles M. Kemp, Georgetown
George H. Comstock, Ivoryton	John Gandy, Collinsville
George McCoy, Middletown	Henry M. Barber, Canton Centre
William J. Beecher, Newtown	Hon. Alberto T. Roraback, Canaan
Joseph T. Benham, New Haven	Dr. H. L. Ross, Canaan
William H. Cooper, New Haven	Hon. Raymond N. Parish, Oakdale
Stephen Johns, New Haven	William H. Williams, Stevenson



W. C. Atwater, Stevenson	Charles R. Just, Shelton
Hon. David Torrence, Stevenson	Samuel A. Eddy, Canaan
Frank C. Burton, Windsor Locks	William R. Wagner, Collinsville
C. F. Cleaveland, Windsor Locks	J. H. Matom, Collinsville
Frank H. Griswold, Windsor Locks	J. H. Bidwell, Collinsville
Frank L. Towne, Windsor Locks	John D. Andrews, Collinsville
Fred. T. Murless, Jr., Windsor Locks	Francis H. Stalford, Ridgefield
Henry C. Douglass, Windsor Locks	R. Otis Sherwood, Ridgefield
Simon B. Douglass, Windsor Locks	Wilbur Olmstead, Ridgefield
John H. Videon, Windsor Locks	Melville Benedict, Ridgefield
Edwin B. Gager, Stevenson	Rollin D. Lane, Hartford
Arthur H. Rice, Granby	M. S. Neal, Collinsville
Fred M. Godard, North Granby	C. W. Ellsworth, Collinsville
O. H. Godard, North Granby	Elbert M. Avery, Georgetown
Henry Z. Thompson, East Granby	H. P. Mansfield, M. D., Georgetown
Ollie C. Godard, North Granby	Elmer E. Bennet, Georgetown
M. L. Loveland, North Granby	Gilson W. Jennings, Georgetown
Mrs. C. P. Gregory, North Granby	Michael Connelly, Georgetown
Harvey Godard, North Granby	Julian Alden Weir, Branchville
Z. R. Robbins, Norwich	William F. Renoud, Branchville
Hon. W. C. Cheney, So. Manchester	Seth S. Beers, Branchville
Wells W. Cheney, So. Manchester	Everett S. Marsh, Branchville
James W. Cheney, So. Manchester	James Clark, Pine Meadow
John M. Johnson, Norwich	Frank Raymond, Pine Meadow
Henry C. Burnham, Hadlyme	Hermon M. Chapin, Pine Meadow
Jesse G. Smith, Hartford	Darius B. Smith, Jr., Pine Meadow
J. C. Bradley, Jr., New Haven	Walter C. Woodruff, New Hartford
Philip J. Rich, Middletown	Charles F. Green, West Goshen
Charles W. Martin, Lebanon	Miner M. Drake, West Torrington
S. N. Hide, North Franklin	S. Barrett, Naugatuck

Two thousand to each. One hundred and fifty of the above persons were those whose application in 1895 was not acted on or fry sent.

All applications for trout fry for distribution in the spring of 1897 must be in the hands of the Secretary of the Commission on or before March 1, 1897, to insure the attention of the Commissioners. This must be done, as we distribute many of the fry in March.

We append a list of "Special Protectors of Fish and Game."

These protectors are instructed to discharge their duties with an eye single to the public interest, and without fear or favor. As they receive no pay for their services, it cannot be reasonably expected that their whole time can be devoted to their duties. In too many cases where the Protector requires a witness and calls upon one who made the complaint, he gets this answer: "O, I don't want to be known in the case; the violators would retaliate if I told what I knew; you must find out the facts by some other means; but don't

let anyone know that I have seen you " Owing to this "cowardice" on the part of those who are clothed as men sometimes are, the violator often escapes.

We find many persons who, beyond the protection of the particular game or fish that they covet, have no interest. We are of the opinion that the game and fish laws of Connecticut are obeyed as well as in any State in the Union. Many complaints we find are without foundation, and we have personally looked up many of the alleged violations, only to find some neighbors' quarrel at the bottom of the complaint—then we stop. If we cannot personally attend to the cases we refer them to our nearest "Special."

#### VIOLATORS CONVICTED.

Sunday hunters.....	14
Sunday net fishing.....	7
Snarer.....	1
Violators bass law.....	2
Killing game in close season.....	1
Illegal pounds.....	1
Illegal fishing on Housatonic River.....	5
Illegal net-mesh, too small.....	1

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In many instances we have warned persons by letter, who have been complained of, that the violations must cease or prosecution would follow. This has in all cases proved useful, and the violations stopped. We do not believe in moral suasion in enforcing these laws, but this is all that we can use for the purpose under our present appropriations. Regarding the law protecting wild deer, whenever these are seen some would-be "mighty Nimrod" usually gets his gun and starts out to slay the animal. We have in many cases written to the person whose passion to kill is aroused, calling attention to the \$100 fine, and his ambition suddenly ceases. We have also had warnings sent out by the press, and without doubt several deer owe their present existence to this method. There are at least one dozen live wild deer now within the borders of this State. We trust that if any public spirited citizen wishes to furnish funds for increasing the supply, he may do so, and due credit will be given.

## SPECIAL PROTECTORS OF FISH AND GAME.

Edson L. Perkins, Litchfield, Conn.  
Charles N. Ellsworth, Collinsville, Conn.  
Theodore D. Adams, Seymour, Conn.  
George W. Eaton, Stafford Springs, Conn.  
Jeremiah G. Dunbar, New London, Conn.  
Elton E. Warren, New Hartford, Conn.  
Henry M. Alling, New Haven, Conn.  
Thomas H. Ward, Lebanon, Conn.  
Andrew W. Loomis, Willimantic, Conn.  
Willard L. Selleck, Bethany, Conn.  
Charles B. Wyllys, Mansfield (Eagleville P. O.), Conn.  
John T. Underhill, Jr., New Milford (Gaylordsville P. O.), Conn.  
Samuel B. Pendleton, Stonington, Conn.  
Forester Keeler, Bridgeport, Conn.  
Apollos S. Bugbee, Saybrook, Conn.  
Lodowick B. Brockway, Lyme (Brockway P. O.), Conn.  
Columbus Reed, West Granby, Conn.  
Charles K. Bailey, Bethel, Conn.  
Charles Dart Meeker, Bethel, Conn.  
Hiram I. Wildman, Kent, Conn.  
James W. Begg, Ansonia, Conn.  
M. Carleton Rodgers, Newtown, Conn.  
John P. Thorpe, Salisbury, Conn.  
Eugene C. Potter, New Britain, Conn.  
Frank A. Snell, Ansonia, Conn.  
James E. Smith, Killingly, Conn.  
Patrick J. O'Connell, Norfolk, Conn.  
Charles D. Cook, Hamden, Conn.  
Clark D. Mackey, Ellington, Conn.  
Charles Taussig, Hartford, Conn.  
Bryon Wooster Munson, M. D., Sharon, Conn.  
DeWitt C. Stevens, Bristol (Forestville P. O.), Conn.  
Irving D. Townsend, Hartford, Conn.  
Thomas Hayes, Woodbridge, Conn.  
William A. Foley, East Hartford, Conn.  
Nelson F. Taylor, Berlin (Kensington P. O.), Conn.  
J. Albert Godard, Windsor, Conn.  
Lewis Jerome Taylor, Glastonbury (South Glastonbury P. O.), Conn.  
John M. Foote, Jr., West Hartford, Conn.  
Ed. J. Buckingham, Huntington, Conn.  
L. Sidney Cowles, Windsor Locks, Conn.  
Wilbur E. Beach, North Haven, Conn.  
John L. Wilson, Suffield, Conn.  
Charles Q. Eldridge, Groton (Old Mystic P. O.), Conn.  
Henry J. Fenton, Windsor (Poquonock P. O.), Conn.  
Abner H. Tibbals, Cromwell, Conn.  
George E. Mallory, Milford, Conn.  
Henry L. Ross, Canaan, Conn.  
J. W. Tryon, Chatham (East Hampton P. O.), Conn.

[From the *Sound Breeze*, Old Lyme, Tuesday, October 27, 1896.]

The Fish Commissioners, Messrs. Williams, Collins, and Bill, during the past week have been releasing the young shad from the State retaining ponds in Lyme, and turning them into the Connecticut River. The practical achievements resulting from the labors of the Commission in growing young shad during the past year have been eminently noteworthy, and when their published report is placed before the people, it can but afford convincing evidence to all, that the money entrusted to them has been carefully and profitably invested. The testimony of the Commission should be conclusive, but there still are those who, to believe, must first see, and as the release of the fish was made in the broad light of day any one was privileged to witness the entire results; nothing was concealed from view. A large number was present, the doubting Thomases being largely in evidence. When the Commissioners closed their labors at the ponds, where they were engaged for a number of days, it is safe to say, that of the numerous spectators present, not one doubted the fact of the fish being young shad, and with a fair chance for surviving until maturity.

To briefly describe the property of the State and the methods used by the Commissioners might be of interest to readers remote from the State's preserve. Three years ago a tract of land lying in the north part of Lyme, known as Joshuatown, was purchased and a perfect title secured.

On this State purchase there were originally two ponds of about twenty acres in extent, fed by a cold mountain stream, which has its source many miles back in East Haddam. The site originally contained a sawmill, but from lack of business it fell somewhat into disuse, and eventually was placed on the market and was secured at a bargain by one of the Commissioners. At once a large force of men were placed at work on the land and two more ponds were constructed by dams being stretched across from narrow places in the adjoining hills, making a chain of four lakes from a point where the waters enter into the Connecticut and back through the steep and in some places rocky hillsides, the furthest lake from the river being something over a mile. The fall from the upper lake to the river is several hundred feet. Each pond is provided with a flume and spillway so that the water is always under absolute control. The second pond from the river offers the steepest and rockiest descent, and a covered boarded way has been constructed, to better protect the fish as they are carried down in the rush of water at liberating time.

After the spring rains are over the gates are more tightly closed and the ponds are filled to their fullest capacity, the spillways carrying off the surplus water.

From the State Hatchery at Birmingham the young fry is brought when but a few days old, and placed in the several ponds, there to remain and grow, unmolested by larger fish, until such time in the fall when they shall become able to take care of themselves.

Last year being the first when fish were placed in the ponds, it might in a sense have been called experimental, as no other State had any such property, but the results were all that could have been expected; it was a success. This year it was definitely known what the result would be, barring calamity; still the result as shown could have been none the less pleasing to the Commissioners, because everyone enjoys success much more than failure.

Shad propagation began in Birmingham early in the year, and during the season the State Messenger placed in the ponds, at twelve different times, several millions of the fry, this number being further augmented by three carloads of young shad direct from the United States Fish Commission; in all, eight millions.

Last Monday was decided upon as being the proper time to begin the liberation. The water from the first or upper pond was gradually drawn off until no water remained, save the stream which flows through the center; this was carefully waded until no fish remained, then the second and third ponds were treated in the same manner. The sides to all the ponds slope towards the center, so the process is made very easy. The last pond being reached, and being a large expanse of water, very great care was necessary to so regulate the flow that it should not be too swift and endanger the lives of the fish, and also to give them the time to gradually settle into the main or central channel. All this was successfully accomplished.

But the drawing off of this last pond in the chain presented a sight at all times interesting and occasionally intensely thrilling. Just outside of the rugged dam that fences in the pond, the clear, blue waters of Connecticut River glistened, and on the inside the surface rippled with the passing wind.

At times small patches on the surface of the pond would darken as if a passing cloud were casting a shade; this would instantly change and the dark backs of the fish would be replaced by their silver sides as they quickly turned in search of deeper water. All of the last day the sight of countless numbers of young shad rushing through the flume was presented and a scoop-net carefully put down would expose them to those standing on the banks. Among the few that were injured, measurements were made, showing shad over five inches in length.

As the wet and dripping banks slowly came to view the limits of the pond gradually circumscribed until there was nothing remaining but the channel, with its noiseless current running out to meet the sea. And thus the labors of the Fish Commissioners, at the retaining pond in Joshuatown, closed for the year 1896, and the ingenious though voiceless process of restocking the Connecticut River with that palatable fish goes silently on.

#### PROPAGATION OF SALMON.

[*From Hartford Times, March 21, 1896.*]

The Commissioners of Fisheries and Game, Hubert Williams of Salisbury, Abbott C. Collins, of Hartford, and James A. Bill of Lyme, held a meeting to-day at the Capitol. They decided to place 50,000 Atlantic sal-



mon in Marcy's Pond in Poquonock. These fish will be kept in the pond until they are eighteen months old, when they will be placed in the Farmington and other rivers of the State. The method of keeping young fish from their enemies, which has been inaugurated by the Commissioners, and the accompanying advantages, have gained immense popularity with the public for the new system. The procedure is on a sensible and practical basis, and its influence on the future fishing interests of the State must be manifold and good as a result. By keeping shad and salmon fry in retaining ponds, which afford favorable conditions for their growth, which have been entirely freed of all other fish, means more shad and salmon. After these fish pass the fry period and attain several inches in length, a large number of the dangers attendant to early fish life are eliminated, for while they are in the retaining ponds they are free from pickerel, black bass, bullheads, perch, eels, dace, and other fish whose gastronomic proclivity is not to the advantage of young shad and salmon fry.

The Commissioners are intensely earnest and are most thoroughly equipped for their work, for they have made a practical study of the situation relating to the question of furnishing food fish for the masses, either for sport or commercial purposes. There can be no question but, with the large area of inland waters in the State, there should be more food fish than at present, and the plans outlined by the Commissioners of Fisheries and Game, are to have our lakes, ponds, streams, and rivers thoroughly stocked with Atlantic salmon, landlocked salmon, pike, perch, lake trout, and other desirable food fish, that will not only attract our own citizens, but visitors from other States.



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ESTIMATE OF AREAS OF PONDS AND LAKES  
AND LENGTHS OF BROOKS AND RIVERS  
IN THE STATE OF CONNECTICUT.

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*Computed from the State Atlas for the Fish and Game Commis-  
sioners, by H. F. Keith, C. E., 1896.*

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## FAIRFIELD COUNTY.

Towns.	No.	Total area of ponds under 20 A	No.	Area Be- tween 20 and 100	No.	Area over 100.	Total acres.	Total length of rivers and brooks in miles.
Bethel.....	2	6					6	23
Bridgeport.....	6	42	2	72	2	S. 292	406	16
Brookfield.....								34
Danbury .....	10	55	5	197	1	130	382	80
Darien .....								19
Easton.....	4	16	2	57			73	43
Fairfield.....	4	17					17	38
Greenwich.....	3	7	1	68	1	S. 125	200	71
Huntington.....	7	25			1	R. 540	565	45
Monroe.....	5	8	1	65			73	39
New Canaan....	3	8	1	24			32	30
New Fairfield....			3	106			106	35
Newtown.....	8	27			2	R. 175 112	314	90
Norwalk .....	5	42	1	S. 32			75	27
Redding .....	1	16	1	20			36	52
Ridgefield.....	8	47	1	32	1	104	183	66
Sherman .....	2	16	1	32			48	40
Stamford .....	2	24					24	57
Stratford .....	4	19			1	R. 590	609	18
Trumbull.....	3	12	1	24			36	37
Weston.....	3	6					6	38
Westport.....	2	12			1	S. 180	192	27
Wilton. ....	3	15	1	84			99	48
	85	420	20	813	10	2,248	3,481	967

## HARTFORD COUNTY.

Towns.	No.	Total area of ponds under 20 A	No.	Area be- tween 20 and 100 A.	No	Area over 100 A.	Total acres	Total length of rivers and brooks in miles.
Avon.....	2	6					6	37
Berlin.....	5	24	4	160	1	120	304	47
Bloomfield.....	2	14	1	45			59	54
Bristol.....	8	52	3	161			213	52
Burlington.....	3	11					11	63
Canton.....	2	8	1	22			30	53
East Granby....	2	10					10	32
East Hartford....	1	15	1	35	1	R. 332	382	29
East Windsor....	2	20	1	24	1	R. 266	310	42
Enfield.....	4	27	2	84	1	R. 575	686	56
Farmington.....	2	10			1	160	170	53
Glastonbury....	13	67	1	50	1	R. 576	693	81
Granby.....	2	9	1	50			59	63
Hartford.....						R. 340	340	24
Hartland.....	1	35					35	55
Manchester.....	15	75					75	40
Marlborough....	4	22	1	52			74	42
New Britain.....	3	12					12	32
Newington.....	1	7					7	19
Plainville.....	3	24	1	50			74	10
Rocky Hill.....	1	5					5	22
Simsbury.....	1	5	1	36			41	58
Southington.....	8	52	1	25	1	140	217	49
South Windsor...	1	10			1	R. 585	595	42
Suffield.....	1	3			1	R. 525	528	39
West Hartford...	4	17	5	180	1	R. 345	542	38
Wethersfield....	3	10	1	28	1	R. 339	377	13
Windsor.....					1	R. 590	590	54
Windsor Locks..	3	5			1	R. 192	197	10
	97	555	25	1,002	13	5,085	6,642	1,206

## LITCHFIELD COUNTY.

Towns.	No.	Total area of ponds under 20 A	No.	Area be- tween 20 and 100 A.	No.	Area over 100 A.	Total acres.	Total length of rivers and brooks in miles
Barkhamsted . . . .	2	18					18	76
Bethlehem . . . . .	1	4			1	153	157	44
Bridgewater . . . . .								26
Canaan . . . . .	1	3			1	102	105	40
Colebrook . . . . .	4	13					13	64
Cornwall . . . . .	3	20					20	70
Goshen . . . . .	2	16	2	62	1	135	213	109
Harwinton . . . . .	2	6	2	48			54	70
Kent . . . . .	4	19	3	177	1	165	361	63
Litchfield . . . . .	5	40	2	64	1	270	374	121
Morris . . . . .	2	26			1	840	866	41
New Hartford . . . .					2	252	252	85
New Milford . . . .								106
Norfolk . . . . .	5	38	2	89	1	192	319	73
North Canaan . . . .								24
Plymouth . . . . .	9	29	1	30			59	47
Roxbury . . . . .								45
Salisbury . . . . .	3	24	2	71	6	1,625	1,720	68
Sharon . . . . .	2	26	2	73	1	190	289	85
Thomaston . . . . .	1	8					8	24
Torrington . . . . .	2	14	2	112			126	76
Warren . . . . .			1	50	1	285	335	32
Washington . . . . .					1	320	320	62
Watertown . . . . .	7	48	3	83			131	52
Winchester . . . . .	1	1	2	84	1	428	513	84
Woodbury . . . . .	6	41					41	76
	62	394	24	943	19	4,957	6,294	1,631

## MIDDLESEX COUNTY.

Towns.	No.	Total area of ponds under 20 A.	No.	Area be- tween 20 and 100 A	No.	Area over 100 A.	Total acres of ponds.	Total length of rivers and brooks in miles.
Chatham.....					2	508 R. 260	768	43
Chester.....	2	5	3	124	1	R. 250	379	17
Clinton.....	3	11					11	16
Cromwell.....	3	6			1	R. 396	402	15
Durham.....	2	8	2	70			78	42
East Haddam....	6	34	1	20	3	R. 425 665	1,144	72
Essex.....	8	33			1	R. 600	633	14
Haddam.....					1	R 1,240	1,240	45
Killingworth....	5	51					51	53
Middlefield.....	2	11	2	78	1	125	214	17
Middletown.....	7	76	1	22			98	68
Old Saybrook....	3	26			1	R. 340	366	18
Portland.....	5	27	3	127	1	R. 768	922	27
Saybrook.....	4	39			2	R. 320 110	469	16
Westbrook.....	1	13					13	22
	51	340	12	441	14	6,007	6,788	495



## NEW HAVEN COUNTY.

Towns.	No.	Area of ponds under 20 A.	No.	Area between 20 and 100 A.	No.	Area over 100 A.	Total acres of ponds.	Total length of rivers and brooks in miles.
Ansonia .....	4	15			1	R. 100	115	10
Beacon Falls ....	3	9			1	R. 140	149	11
Bethany.....	3	18	1	35			53	38
Branford.....	1	8			1	165	173	28
Cheshire.....	1	9					9	45
Derby.....	2	24	1	R. 40			64	8
East Haven. ....	1	4			1	230	234	9
Guilford.....	1	6	1	65	1	104	175	73
Hamden.....	5	34	1	37	1	215	286	38
Madison.....	4	16					16	49
Meriden.....	6	38	1	93	1	134	265	33
Middlebury.....	2	7	1	78	1	280	365	30
Milford.....	7	23	2	S. 165	1	R. 260	448	29
Naugatuck.. ....	1	5			1	R. 130	135	35
New Haven. ....	1	3	1	28			31	9
North Branford..	3	23	1	28			51	41
North Haven....	2	5					5	32
Orange.....	8	48	1	25	1	R. 100	173	55
Oxford.....	8	45			1	R. 132	177	52
Prospect.....			1	23			23	24
Seymour.....	3	3			1	R. 130	133	34
Southbury.....	3	10			1	R. 110	120	79
Wallingford. ....	3	14	2	82	1	134	230	66
Waterbury.....	7	40	2	75			115	58
Wolcott. ....	5	29	3	215			244	50
Woodbridge. ....	5	11	1	35			46	37
	80	447	20	1,024	15	2,364	3,835	973

## NEW LONDON COUNTY.

Towns.	No.	Total area of ponds under 20 A.	No.	Area be- tween 20 and 100 A.	No.	Area over 100 A.	Total area of ponds.	Total length of rivers and brooks in miles.
Bozrah.....	1	12	1	60			72	36
Colchester.....	8	28	2	105	1	128	261	76
East Lyme.....	8	39	3	120	3	S. & F. 716	875	40
Franklin.....	3	18					18	20
Griswold.....	4	10	3	326	1	890	1,226	51
Groton.....	10	65	2	79	3	S. 822	966	40
Lebanon.....	9	34	1	74	2	233	341	74
Ledyard.....	8	53			2	R. 310	363	45
Lisbon .....	2	17					17	29
Lyme.....	5	35	3	127	1	R. 900	1,062	43
Montville.....	9	67	3	148	2	R. 653 116	984	71
New London....								1
North Stonington	6	17	4	240			257	87
Norwich.....	3	14	1	76	1	R. 813	903	41
Old Lyme.....	3	28			2	130 R. 355	813	30
Preston.....	8	25	4	195	1		220	56
Salem.....	1	3	1	25	1	348	376	37
Sprague.....	1	11	2	98	1	205	314	16
Stonington .....	7	45			1	S. 180	225	28
Voluntown .....	10	48	3	119	1	250	417	63
Waterford.....	1	2	3	140	2	S. 416 R. 832	1,390	33
	107	571	36	1,932	25	8,297	10,900	917

## TOLLAND COUNTY.

Towns.	No.	Total area of ponds under 20 A.	No.	Area be- tween 20 and 100 A.	No.	Area over 100 A.	Total area of ponds	Total length of rivers and brooks in miles.
Andover.....								36
Bolton.....	1	2	1	25	1	180	207	26
Columbia .....			1	28	1	275	303	24
Coventry.....					1	395	395	58
Ellington.....	1	4			1	192	196	56
Hebron.....	3	11	2	142			153	55
Mansfield.....	6	29	2	192			221	80
Somers.....	4	40			1	40	80	46
Stafford.....	14	74	4	172	1	164	410	100
Tolland.....	3	18			1	377	395	82
Union. ....	8	41	1	32	1	300	373	48
Vernon .....	5	52	1	45	1	115	212	28
Willington.....	5	18					18	55
	50	289	12	636	9	2,038	2,963	694

## WINDHAM COUNTY.

Towns.	No.	Total area of ponds under 20 A	No	Area be- tween 20 and 100 A.	No.	Area over 100 A.	Total area of ponds.	Total length of rivers in miles.
Ashford.....	3	16	2	116			132	61
Brooklyn.....	3	5					5	35
Canterbury.....	6	23					23	69
Chaplin.....	2	12					12	27
Eastford.....	3	12	1	50	1	140	202	48
Hampton.....	2	13					13	34
Killingly.....	19	61	8	325	2	350	736	60
Plainfield.....	4	29	1	45	1	120	194	68
Pomfret.....	3	23					23	53
Putnam.....	6	28	1	30			58	32
Scotland.....	2	5					5	16
Sterling.....	5	48					48	43
Thompson.....	6	38	3	75	2	493	606	76
Windham.....	5	16					16	36
Woodstock.....	25	122	5	227	2	272	621	78
	94	451	21	868	8	1,375	2,694	736

R. in the foregoing tables means Rivers.

S. in the foregoing tables means Salt.

## SUMMARY.

Counties.	No.	Total area of ponds under 20 A	No.	Area be- tween 20 and 100 A	No	Area over 100 A.	Total acres.	Total length of rivers in miles.
Fairfield.....	85	420	20	813	10	2,248	3,481	967
Hartford.....	97	555	25	1,002	13	5,085	6,642	1,206
Litchfield.....	62	394	24	943	19	4,957	6,294	1,631
Middlesex.....	51	340	12	441	14	6,007	6,788	495
New Haven . . .	89	447	20	1,024	15	2,364	3,835	973
New London.....	107	571	36	1,932	25	8,297	10,900	917
Tolland.....	50	289	12	636	9	2,038	2,963	694
Windham.....	94	451	21	868	8	1,375	2,694	736
	635	3,467	170	7,659	113	32,371	43,597	7,619

## FINANCIAL STATEMENT.

Balance of appropriation in treasury ending September 30, 1894..	\$2,306 31
Shad hatching at Shelton .....	\$788 34
Shad hatching at Poquonock.....	801 65
Expense on two car-loads shad fry, Washington.....	131 17
Pay and expenses of Commissioners .....	502 35
Wire cloth, printing bill, and surveying.....	82 80
	2,306 31

The above closes the appropriation under the old Board of Fish Commissioners.

### SHAD APPROPRIATION ENDING SEPTEMBER 30, 1897.

Amount appropriated.....	\$4,000 00
J. A. Sterling, hatchery, Poquonock..	\$114 50
G. B. Sterling, hatchery, Birmingham.....	83 25
Transporting shad fry, Washington.....	104 00
	301 75
In treasury, September 30, 1895.....	\$3,698 25

### RETAINING PLANTS APPROPRIATION ENDING SEPTEMBER 30, 1897.

Amounts appropriated.....	\$1,000 00
Amounts appropriated.....	2,000 00
	3,000 00
Amount expended September 30, 1895.....	15 60
In treasury September 30, 1895.....	\$2,984 40

### TROUT AND SALMON APPROPRIATION ENDING SEPTEMBER 30, 1897.

Amount appropriated.....	\$5,000 00
C. W. Barnum, 600,000 trout fry.....	\$1,500 00
Nonpareil Printing Co., bill.....	18 50
	1,518 50
In treasury September 30, 1895.....	\$3,481 50

### COMMISSIONERS OF FISHERIES AND GAME APPROPRIATION FOR SERVICES AND EXPENSES OF COMMISSIONERS ENDING SEPTEMBER 30, 1897.

Pay and expenses of Commissioners.....	\$3,000 00
For clerical services .....	400 00
Amount.....	\$3,400 00
Drawn by Commissioners, pay and expenses.....	\$677 79
Printing bills and other expenses.....	34 33
	712 12
Amount in treasury September 30, 1895.....	\$2,687 88



## SHAD APPROPRIATION ENDING SEPTEMBER 30, 1897.

Amount appropriated.....	\$4,000 00
Amount expended September 30, 1895.....	301 75

Expenditure for 1896.....	\$3,698 25
Expenses shad hatchery, Birmingham.....	\$928 71
Expenses shad hatchery, Poquonock.....	892 05
Transporting shad fry, Washington.....	179 81
Printing bills.....	76 00
Detective work on Connecticut and Housatonic Rivers,	104 65
	<u>2,181 22</u>

In treasury September 30, 1896.....	\$1,517 03
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## RETAINING PLANT APPROPRIATION ENDING SEPTEMBER 30, 1897.

Amount appropriated.....	\$1,000 00
Amount appropriated.....	2,000 00
	<u>3,000 00</u>
Amount expended September 30, 1895 .....	15 60
	<u>\$2,984 40</u>

## EXPENDED FOR THE YEAR 1896.

Expended on dam and pond No. 3, building same.. .	\$1,516 08
Superintendent's bill, services and expenses.....	203 57
Cement bills.....	61 77
	<u>1,781 42</u>

In treasury September 30, 1896.....	\$1,202 98
-------------------------------------	------------

## TROUT AND SALMON APPROPRIATION ENDING SEPTEMBER 30, 1897.

Amount appropriated.....	\$5,000 00
Amount expended September 30, 1895.....	1,518 50
	<u>\$3,481 50</u>

## EXPENDED FOR 1896.

H. A. Bishop, hatching salmon eggs and 824,000 trout fry.....	\$1,700 00
Delivering same, less collections.....	207 11
Engineering and State atlas.....	76 84
Bill for fish cans .....	32 50
Use of pond and stream for salmon and trout.....	47 24
Printing blanks for fish returns.....	29 15
	<u>2,092 84</u>

In treasury September 30, 1896.....	\$1,388 66
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COMMISSIONERS OF FISHERIES AND GAME, SERVICES AND EXPENSES  
ENDING SEPTEMBER 30, 1897.

Amount.....	\$3,400 00
Amount expended September 30, 1895.....	712 12
	<u>\$2,687 88</u>

## EXPENDED IN 1896.

Drawn by Commissioners, pay and expenses .....	\$1,351 89	
Bill of printing letter heads, etc.....	24 25	
		<u>\$1,351 89</u>
In treasury September 30, 1896.....		\$1,335 99

## INVENTORY.

The following is an inventory of property of the State, December 1, 1896, at—

## JOSHUATOWN.

Four retaining plants for shad and salmon, November 1, 1894,	\$5,285 00
Finishing up pond No. 3, fall of 1895 .....	673 00
Raising dam No. 3, spring of 1896 .....	407 00
Hatchery building, with piping and fixtures.....	430 00
Two new aquariums ... ..	35 00
Thirteen new hatching jars, \$5.25 .....	67 25
Bill of tools in hatchery, to wit: 3 new fish cans, 12 pans, 1 lantern, 1 wash tub, 1 milk pan, 1 tin pail, wire screening, 1 new seine, fine mesh, 1 new adze, 1 grindstone, 1 fork, 2 water pails and dipper, 6 new and 8 old wheelbarrows, 5 axes, 3 picks, 7 shovels, 3 hooks, 1 fork, 1 cant hook, 3½ barrels Portland cement, 1 oil can, 1 crowbar, 1 hay knife, total.....	65 00
Total .....	<u>\$6,962 25</u>

## SHELTON.

1 wood building .....	\$150 00
1 dory boat, 14 feet long, etc.....	15 00
18 jars for hatching, @ 5.25.....	94 50
2 aquariums, filters and pipe.....	40 00
1 new hauling seine, with rope, 10 rods long.....	26 00
1 old hauling seine, with rope, 12 rods long.....	5 00
2 new cans for conveying fry.....	6 00
3 chairs, 1 thermometer, pans, pails, hammer, etc.....	4 00
Total.....	<u>\$340 50</u>

## POQUONOCK.

3 hand saws.....	3 30
2 chisels.....	65
1 scratch awl.....	10
2 paint brushes.....	1 10
Supply pipe and fittings.....	203 11
40 faucets.....	4 00
9 stripping pans.....	1 50
1 knife.....	75
1 fishing pail.....	1 25
1 fishing can.....	1 75
1 plane.....	60
1 stove and fixtures.....	10 75
1 hoe.....	35
2 lanterns.....	2 25
3 bits.....	90
1 bevel.....	35
1 screw driver.....	35
Rubber hose.....	3 57
1 tub.....	1 05
1 gravel sifter.....	25
1 tin pail.....	50
1 seine.....	15 00
1 aquarium.....	7 00
10 hatching jars and fixtures.....	55 00
1 axe.....	1 00
40 hatching boxes.....	280 00
4 filtering boxes.....	40 00
6 distributing boxes.....	30 00
1 crow bar.....	50
126 feet iron pipe.....	18 60
Total.....	<hr/> \$686 53

## SUMMARY.

Inventory at Joshuatown.....	\$6,962 25
Inventory at Shelton.....	340 50
Inventory at Poquonock.....	686 53
Total.....	<hr/> \$7,989 28

## PROPOSED LEGISLATION.

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*Be it enacted by the Senate and House of Representatives, in General Assembly convened :*

SECTION 1. Nothing in the Statutes of this State or in any amendments thereto shall be so construed as to prevent the taking of fish, crustaceans, birds or animals by the Commissioners of Fisheries and Game or their duly authorized agent or agents, in such manner, at such times, and at such places, as the said Commissioners shall deem expedient for the purposes of fulfilling the duties of their office as such Commissioners.

SEC. 2. This act shall take effect from its passage.

*Be it enacted by the Senate and House of Representatives, in General Assembly convened :*

SECTION 1. Section 2536 of the general statutes is hereby amended by striking out from said section the words "kingfisher" and "heron."

SEC. 2. This act shall take effect from its passage.

*Be it enacted by the Senate and House of Representatives, in General Assembly convened :*

SECTION 1. Section 2541 is hereby amended to read as follows : Every person who shall kill, keep when killed, or expose for sale any wild duck, goose, or brant, in March, April, May, June, July or August, or who shall kill, attempt to kill, or take any such fowl in any other way than with a gun such as is commonly raised at arm's length and fired from the shoulder, or who shall shoot at any such birds or other wild fowl from any boat or vessel propelled by steam, naphtha, or electricity, sails, or in any other way than by an oar or oars held in the hands, or from any boat or structure attached to or connected with said vessel, shall be fined seven dollars for each offense.

SEC. 2. This act shall take effect from its passage.

An Act Concerning the Taking of Wild Duck, Wild Geese, Wild Brant, Ruffed Grouse, Pheasants, Etc.

*Be it enacted by the Senate and House of Representatives, in General Assembly convened :*

SECTION 1. Section 2545 of the General Statutes is hereby amended to read as follows : Any person who shall at any time or place, within the limits of this State, with any trap, net, snare, device, or in any other way than with a gun, such as is commonly raised at arm's length and fired from the shoulder, kill, catch, take or attempt to kill, catch or take any wild goose, brant, or wild duck of any variety, ruffed grouse or partridge, quail or woodcock, English or Mongolian pheasant, or any member of the grouse

or pheasant family, shall be fined not less than seven dollars for each such offence. And any person who shall have in his possession at any time or place within the limits of this State, any such bird or fowl so caught, killed, or taken in violation of this section, shall be fined seven dollars for each bird or fowl so taken or caught or had in possession.

SEC. 2. This act shall take effect from its passage.

We herewith present for the purpose of comparison the present and proposed law regulating the taking of lobsters.

#### CHAPTER VIII.

##### An Act Concerning the Taking of Lobsters.

*Be it enacted by the Senate and House of Representatives, in General Assembly convened:*

SECTION 1. Section 2414 of the General Statutes is hereby amended to read as follows: Every person who shall at any time take, sell, or have in his possession, with intent to sell or destroy, any lobster less than seven and one-half inches long, measuring from head to end of the tail, exclusive of claws and feelers, or any female lobster with the ova or spawn attached, shall be fined not less than ten nor more than fifty dollars, or imprisoned not more than thirty days, or both.

SEC. 2. This act shall take effect from its passage.

Approved, March 14, 1895.

#### PROPOSED LAW.

##### An Act Concerning the Taking of Lobsters.

*Be it enacted by the Senate and House of Representatives, in General Assembly convened:*

SECTION 1. Chapter VIII of the Public Acts of Connecticut, passed January Session, 1895, is hereby repealed.

SEC. 2. Section 2414 of the General Statutes is hereby amended to read as follows: Every person who shall at any time catch, take, buy or sell, or expose for sale, or possess for any purpose any lobster less than ten and one-half inches in length, alive or dead, measured in the following manner: Taking the length of the back of the lobster, measured from the bone of the nose to the end of the bone of the middle flipper of the tail, such length to be taken with lobster extended on the back, its natural length, and any lobster in spawn or with eggs attached caught at any season shall be liberated alive at the risk and cost of the party or parties taking them, and every person shall be fined not less than seven nor more than fifty dollars for each such lobster taken and kept by them, or be imprisoned not more than thirty days, or both.

SEC. 3. Nothing in this act shall be so construed as to prevent the Commissioners of Fisheries and Game, or their agents duly appointed, from taking lobsters for the purpose of propagation at such times and places, and in such manner as they shall deem best.

SEC. 4. This act shall take effect from its passage.

### WALL-EYED PIKE OR PIKE-PERCH.

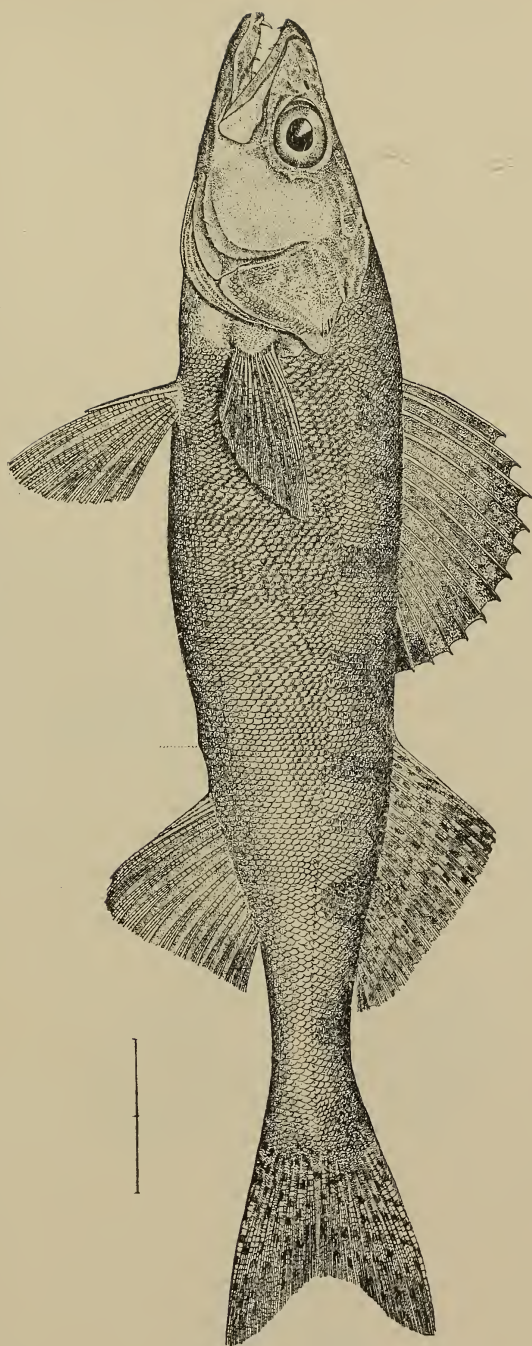
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The cuts we are able to offer through the kind offices of the United States Commission of Fisheries and Fish enabling us to get the plates at nominal cost, give no idea of the coloring of the fish shown.

The wall-eyed pike is entitled to be called a thing of beauty, in spite of his somewhat fierce looking head. It is shaped much like the pickerel, finned and marked more like the perch, the prevailing colors being olive and old gold. If you wish for sport in their capture don't pull them out of the water as rapidly as you can, for if you will give them an opportunity, they will on nearing the surface make the effort of their lives, and put up a good fight. They are an excellent food fish, and thrive from Canada to California. We have waters thoroughly adapted to the requirements of these fish. In a lake where they were first placed four years ago, a seven pound specimen has been taken. They bite better at nightfall or on dark days.



WALL-EYED PIKE OR PIKE PERCH.



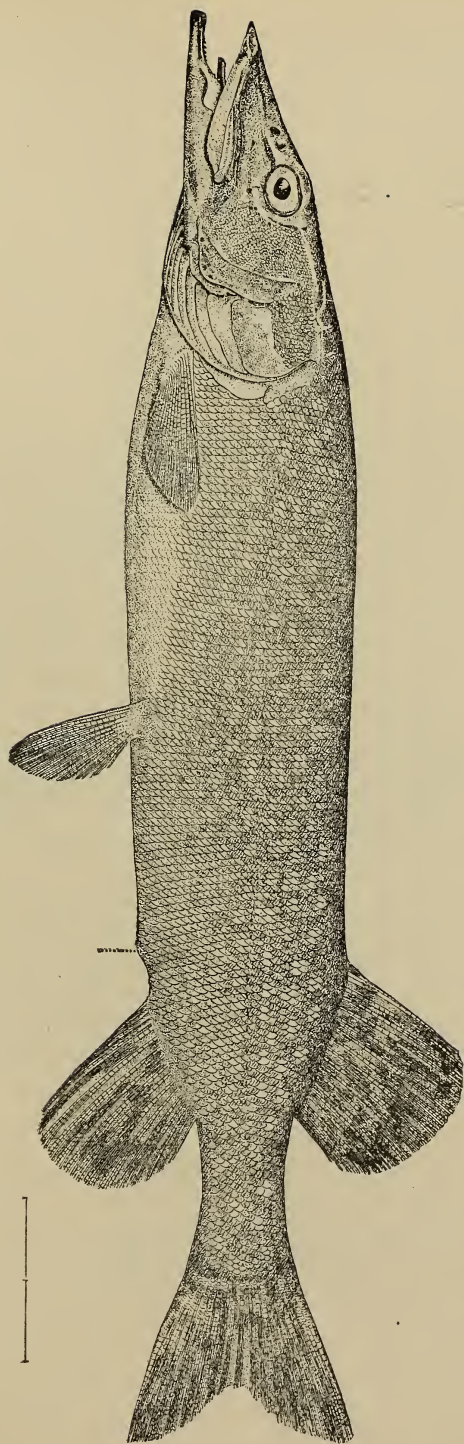
## PICKEREL.

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The cut herewith presented is by the Government Commission called pike or pickerel. As will be at once noticed by our fishermen, the markings are quite different in this cut from that of our common pickerel. Our fish, as we understand it, is the chain pickerel, so-called because the marking instead of being in the way of separate and distinct spots is connected like the links of a chain. The pike is the *esox lucius*, the chain pickerel the *esox reticulatus*.

As many of us know from experience, the chain pickerel taken from certain waters of our State is a dainty one on the table, though a cannibal and pirate combined before leaving his home for our benefit. Many of our lakes and ponds, once swarming with these fish, have now but few remaining.

PIKE, OR PICKEREL.



## BROOK TROUT.

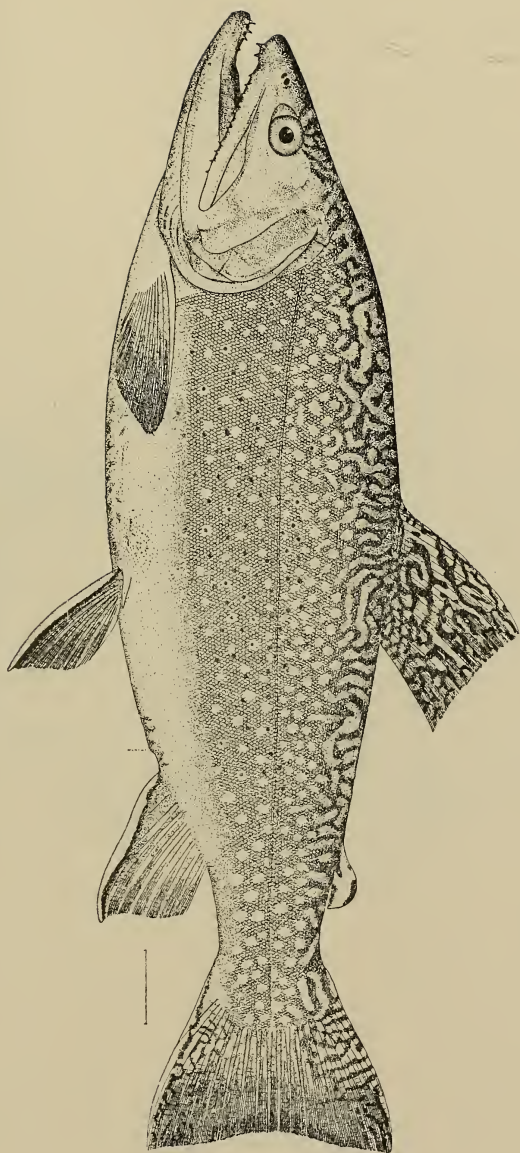
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The Eastern Brook Trout stands easily at the head of the game and table fish of our State. Connecticut has miles and miles of water adapted to their life and growth, and the people of the State can do no one thing that will bring a large and sure yearly income to them as promptly and certainly as by making such waters swarm with these fish. The amount of money yearly expended in the pursuit of this fish by old Isaac's disciples is enough to be well worth a trial of "Yankee" ingenuity to secure. Maine, Canada, Wyoming, and Colorado are not too far away for the angler of to day. The following from Massachusetts is not overdrawn :

"Hundreds of thousands of dollars are expended by our people  
"in Maine and New Hampshire, in the pursuit of fish and game  
"Would it not be economy for the State to protect and increase our  
"fish and game, so that a portion of this money may be retained  
"at home?"

How many of the "kickers" on the six inch law on brook trout have ever weighed one? Just experiment a little in this line, and you will all know more and have more humility and less self respect. All true sportsmen, and all who make fishing a business, should pull together, as their interests are identical. This Commission is established to aid, and not retard, any effort in the right direction, and will gladly co-operate with you all.

THE EASTERN BROOK TROUT.



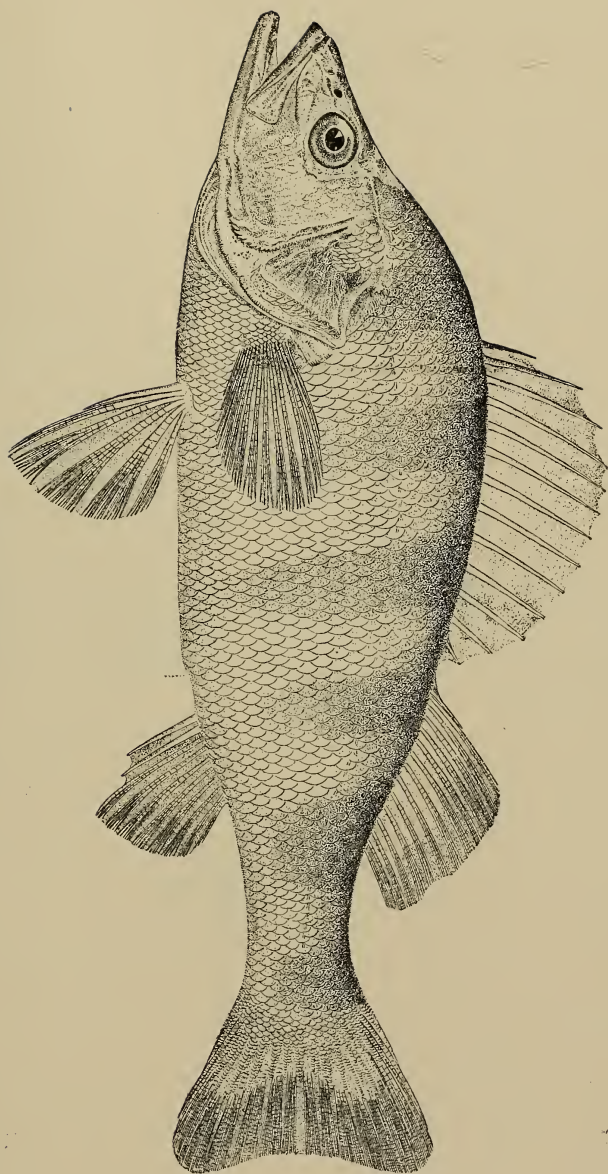


### YELLOW PERCH.

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The Yellow Perch is too well known and is too dear to the heart of the embryo fisherman to require extended mention. It can hardly be classed as a game fish, still a yellow perch weighing from three-quarters of a pound up will make a very respectable fight for life. In some States this fish is almost exterminated, and its artificial propagation has been taken up. The yellow perch does not like to be alone, and while not always to be found in "schools," still is rarely found without others of its kind in close proximity, and almost surely in the company of the sun fish, or pumpkin seed. The food qualities of the yellow perch are by no means to be despised, the flesh being hard and sweet.





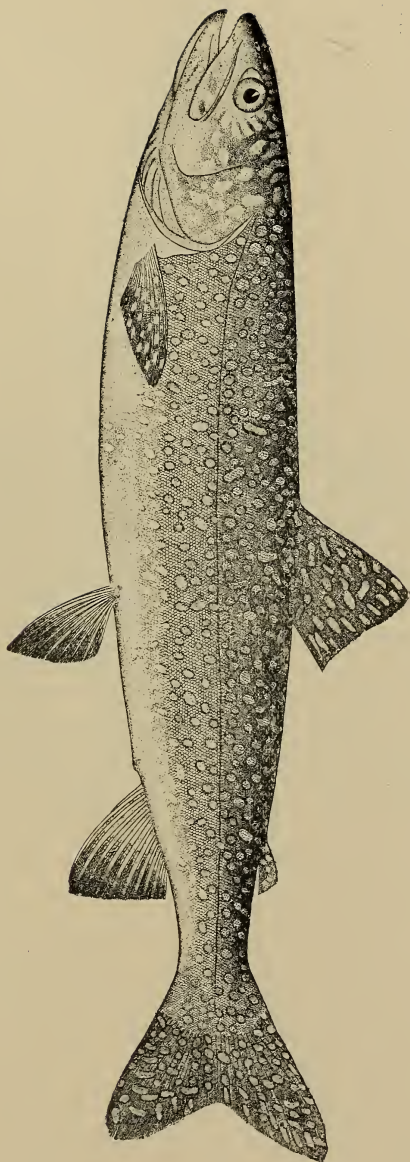
YELLOW PERCH.

## THE LAKE TROUT.

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This fish has not been long enough in our waters to demonstrate whether it will take kindly to us or not. We have some lakes wherein it should thrive. It is a fair food fish, and at times affords reasonable sport.

LAKE TROUT.

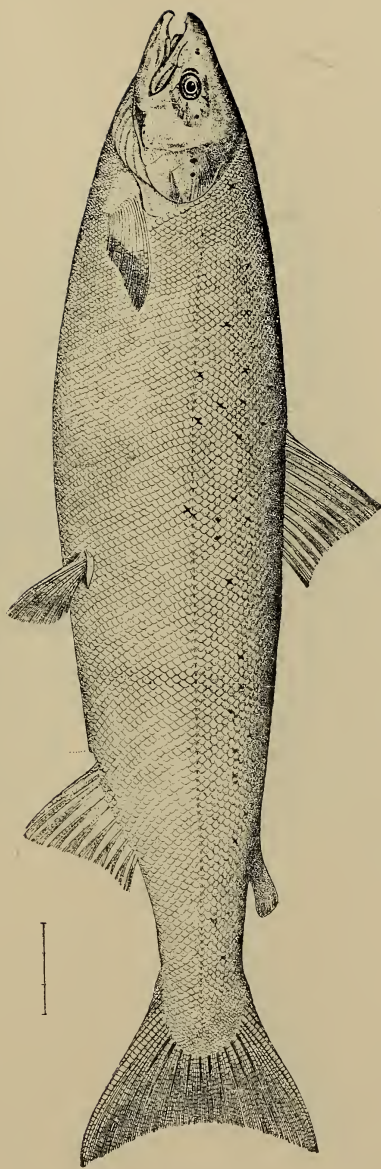


## ATLANTIC SALMON.

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The Atlantic Salmon is by common consent the king of game and table fish. In the years gone by it was as common in our rivers as the shad, but is now rarely seen, except as sent in from other States, and at a price that is prohibitive to all but the wealthy. We are trying the "Retaining Pond" experiment with these fish and hope that we may thus succeed in replenishing our rivers. We are advised by the best authorities on these subjects that we are on the right track, and almost sure of success. Those we now have will be fish six to eight inches long when released, and must have a much better chance of survival than if turned into rivers swarming with their enemies, when too young and small to make even a vigorous effort to save their lives.

ATLANTIC SALMON.



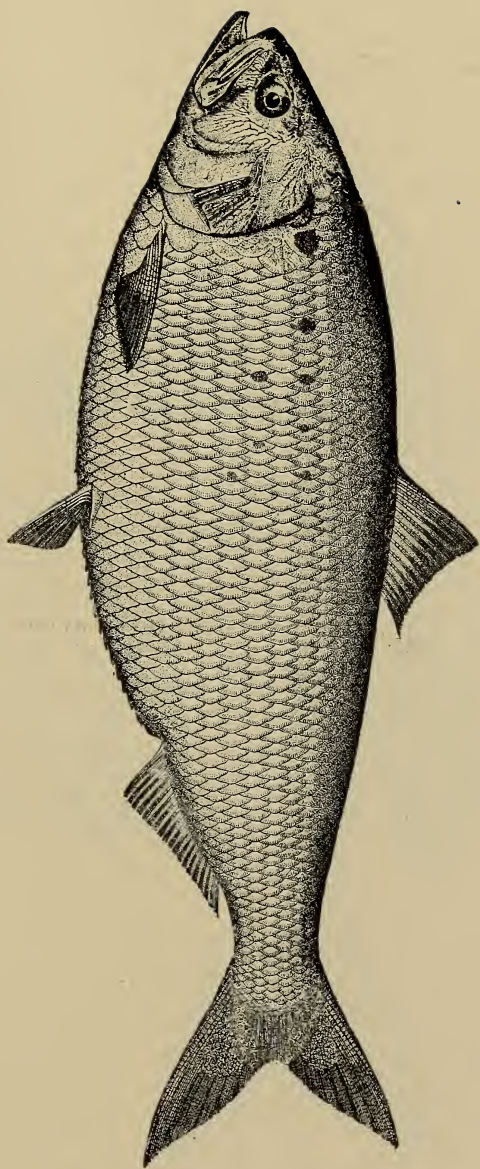
## SHAD.

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This fish needs no introduction to a Connecticut audience. It has yearly visited us, and his advent is as eagerly looked forward to as is the adjournment of the Legislature. The shad when first hatched is as small as it can be and still have room enough for life. A man might look into a forty quart can containing thousands of these fry, and be excused for thinking that the can had only water in it. They grow rapidly, attaining under favorable conditions a length of from three to five inches at four months of age. It is supposed that at the age of three years they return to us again large enough to catch. California has demonstrated beyond question that they will return to substantially the same waters in which they spent the first few months of their existence. They are the most easily killed fish that we know of, and, except as very small fry, will admit of no handling, even with gloves.



THE SHAD.

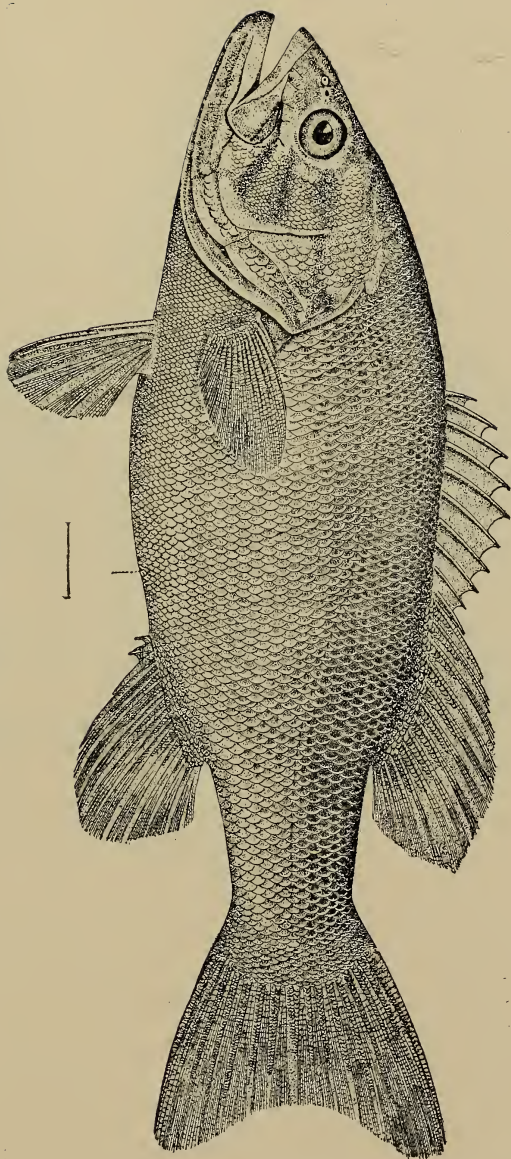


### THE SMALL MOUTHED BLACK BASS.

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The Small Mouthed Black Bass is well known to all who, like the Saint of old, say, "I go a fishing." No one questions his game qualities who has once hooked one. There are, however, many opinions as to his desirability as a food fish, and as to whether or not he is a scourge to other fish life. So far as our experience goes Bass and Pickerel ought not to try to inhabit the same inclosed waters. Now-a-days, when the lion and lamb lie down together, the lamb is likely to be inside of the lion. Which is lion and which lamb in this case deponent saith not. We think the Bass great spawn eaters. They are extremely changeable in their likes and dislikes, the tid-bit of to-day apparently causing nausea to-morrow.

SMALL MOUTHED BLACK BASS.



## WHITE PERCH.

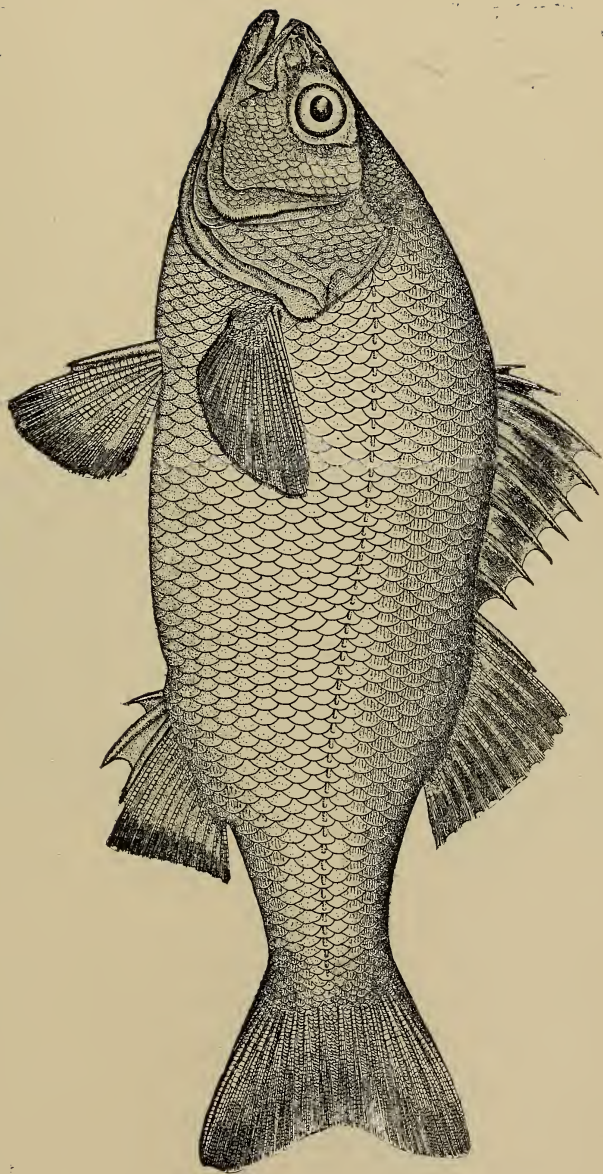
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As to the White Perch we have to say that we believe it can be made a common fish in all the brackish waters of the State. It is in appearance a handsome fish, an eager biter, and is esteemed by most anglers—considering its size—as a game fish. It is conceded by all to be a delicious pan-fish.

While the natural habitat of the White Perch hardly seems to extend beyond the reach of tide water, it can be successfully reared in strictly fresh water.

† They are thoroughly gregarious, and usually many can be caught while a school is passing.

WHITE PERCH.





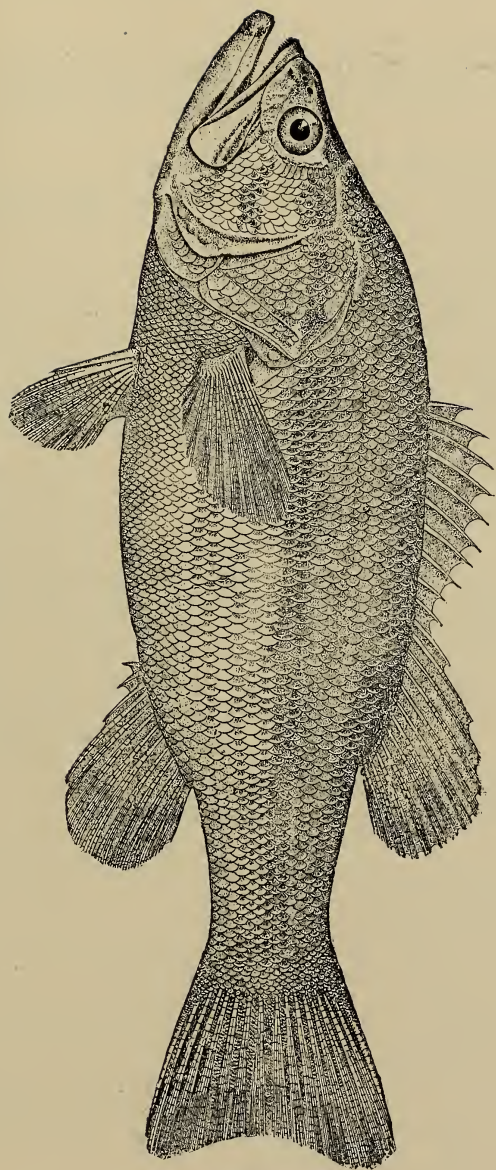
## THE LARGE MOUTHED BLACK BASS.

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The Large Mouthed Black Bass is also known as the Oswego Bass. So far as we know there are comparatively few of these fish in this State. It is certainly not advisable to place either the basses or pickerel in waters where there are trout, or where they can get into waters inhabited by trout. We are sure that many men in the State would be better pleased, if after a day's fishing they had a basket full of perch, pickerel, bass, or even bullheads, than to be able to feel sure that they had almost had a bite from some distinctively game fish, from some other country. We believe in letting others labor and experiment, and if any good thing comes out of such labor and experiment, then let Connecticut enter into the fruit harvest.



LARGE MOUTHED BLACK BASS.



## APPLICATION FOR BROOK TROUT FRY.

1897.

*Connecticut Fisheries and Game Commissioners:*

GENTLEMEN,—I herewith tender you my application for brook trout fry.

My full name is.....

My post-office address is.....

The nearest telegraph office is.....

The nearest express office is.....

I will meet and receive the fish at.....

Name of railroad.....

Name of public stream where the fish are to be planted.....

In what town.....

Is it strictly a *public stream*?.....

Is it a natural trout stream?.....

Give results of previous stocking.....

Tributary to what stream, pond or lake?.....

If applicant does not own the borders of the above-named stream, has he permission from the owner or owners to plant the fish applied for?.....

Does the stream run through wild or cultivated lands?.....

Is the law relating to fish properly enforced?.....

Is it expressly understood and agreed by the applicant that all fish allotted to him by the State of Connecticut, through the Fish and Game Commission, are for, and will be liberated in, the *public stream* named herein?.....

Is it desired that the fry be taken to the point of planting by the distributing agent of the commission to be planted by him?.....

Is the person who is to receive the fry experienced and competent to take care of and plant them?.....

Do you agree to return the cans *promptly*?.....

What kinds of fish are in the stream?.....

What is the principal food for trout in the stream?.....

Sign full name.....

This application must be completed and forwarded to either of the Commissioners before March 1, 1897.

N. B. It is highly important that every inquiry should be fully answered and the names of all waters mentioned, and, especially, the names and address of applicants should be plainly and correctly written,—otherwise the application may be deferred.

## APPLICATION FOR FINGERLING BROOK TROUT.

1897.

*Connecticut Fisheries and Game Commissioners :*

GENTLEMEN,—I herewith tender you my application for fingerling brook trout.

My full name is.....

My post-office address is.....

The nearest telegraph office is.....

The nearest express office is.....

I will meet and receive the fish at.....

Name of railroad.....

Name of public stream where the fish are to be planted.....

In what town.....

Is it strictly a *public stream*?.....

Is it a natural trout stream?.....

Give results of previous stocking.....

Tributary to what stream, pond or lake?.....

If applicant does not own the borders of the above-named stream, has he permission from the owner or owners to plant the fish applied for?....

Does the stream run through wild or cultivated lands?.....

Is the law relating to fish properly enforced?.....

Is it expressly understood and agreed by the applicant that all fish allotted to him by the State of Connecticut, through the Fish and Game Commission, are for, and will be liberated in, the *public stream* named herein?.....

Is it desired that the fish be taken to the point of planting by the distributing agent of the commission to be planted by him?.....

.....

Is the person who is to receive the fish experienced and competent to take care of and plant them?.....

Do you agree to return the cans *promptly*?.....

What kinds of fish are in the stream?.....

What is the principal food for trout in the stream?.....

Sign full name.....

Detach date, fill out and send before October 1, 1897.

Write plainly, answer every question.

## REMARKS AND INSTRUCTIONS RELATING TO BROOK TROUT FRY.

---

All brook trout fry distributed by the State through the Fish and Game Commission are for *public streams* only.

Persons desiring brook trout fry must arrange to receive them promptly, at their nearest station on the main line of railroad, as the messenger in charge generally has fish for different persons each trip. No fish will be left at a railroad station unless some duly authorized person is there to receive and care for them.

Deposit small numbers of fry in the springs and rills at the extreme head waters of the stream or lake, if possible, where large fish cannot feed on them, and where they can find hiding places.

*No person should go to sleep while transporting fish, or leave them alone when in the cans, as it will be sure death to them.*

Water in cans containing fish always requires ærating (to supply with air), either by constant dipping, or by shaking the cans, as directed by the messenger on delivery; who will give full instructions as to the care of the fish during transportation.

Brook trout fry will be distributed only for those waters which are favorable to their growth and reproduction. They should never, under any circumstances, be introduced in waters ranging above 70 degrees (Fah.) in midsummer, or in water containing mudpouts, bass, pickerel, pike, or any fish destructive to the salmon family.

Good results cannot be expected from planting brook trout fry in *public waters*, unless the laws relating to fish are properly enforced, and special pains are taken to plant the fish in proper places, and in streams where the conditions are favorable.

The application on previous page for brook trout fry must be completed and forwarded to either of the Commissioners before March 1, 1897.

The application for fingerling brook trout must be forwarded before October 1, 1897.



George C. Waldo. }  
Christian Swartz. } COMMISSIONERS.  
George W. Hallock. }

SCALE  $\frac{1}{20000}$

*Note:*  
Figures inside the Natural Bed lines  
are buoy numbers.

Seaside Park.

Prepared by  
David C. Sanford, C.E.

Stratford Pt. Lt.

*Point No Point.*

*Stratford Natural Bed, 3057 Acres.*

G. H. Townsend.

Henry C. Rowe.

W. M. Rowland & Co.

H. C. Rowe.

STANDARD ASSOCIATION BRIDGEPORT, CONN.

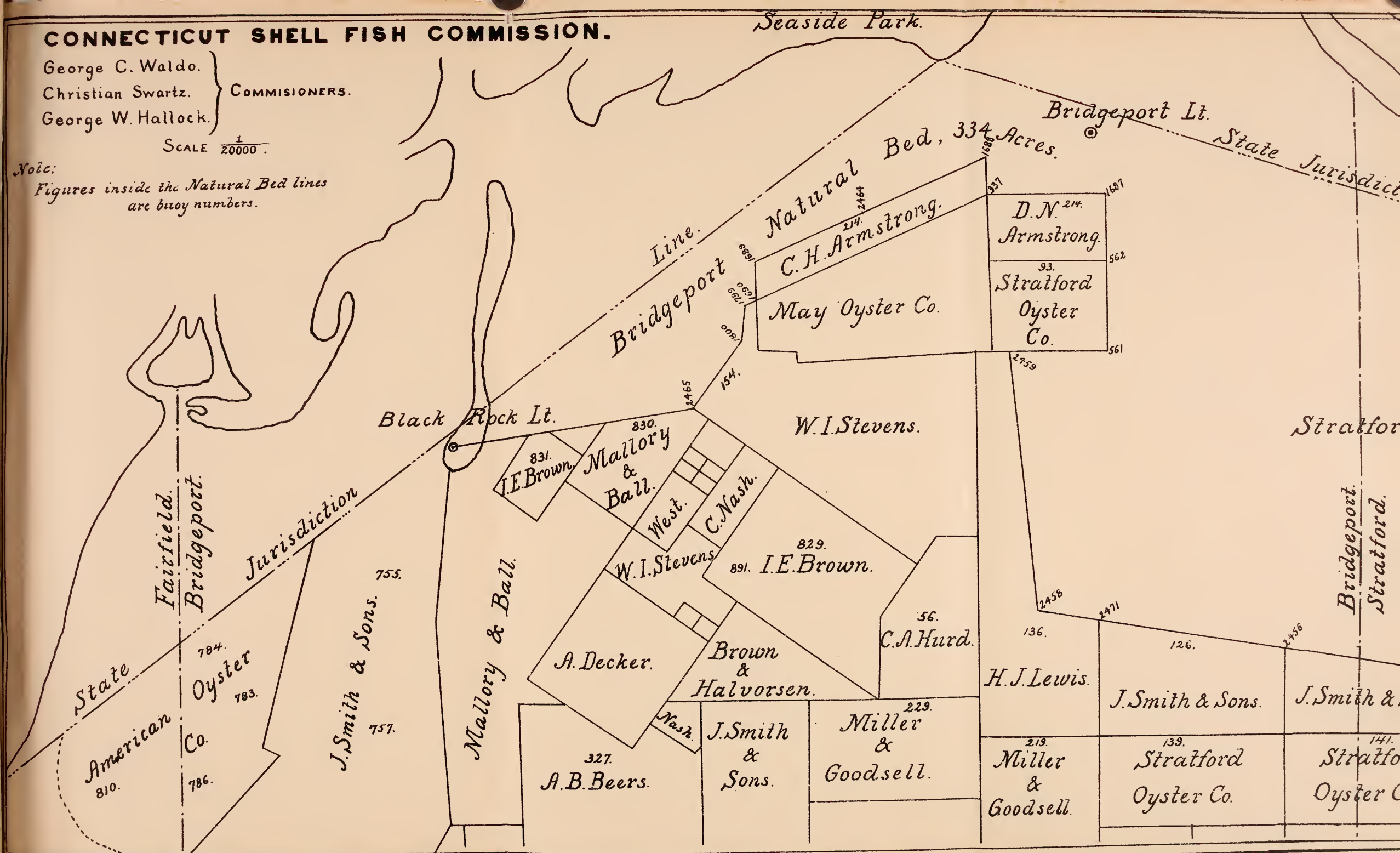
# CONNECTICUT SHELL FISH COMMISSION.

George C. Waldo.  
Christian Swartz.  
George W. Hallock. } COMMISSIONERS.

SCALE  $\frac{1}{20000}$ .

Note:

Figures inside the Natural Bed lines are buoy numbers.







George C. Wells  
Christina Sweet  
George W. Sullivan

State House

Printed by the State Printer, Hartford, Conn.  
1888



ANNUAL REPORT  
OF THE  
SHELL-FISH COMMISSIONERS.



STATE OF CONNECTICUT.

1896.



BRIDGEPORT, CONN.:  
THE STANDARD ASSOCIATION, PRINTERS AND PUBLISHERS.



# REPORT.

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*To the Hon. O. Vincent Coffin, Governor of the State of Connecticut:*

In accordance with a resolution passed at the legislative session of January, 1895, requiring all Boards and Commissions of the State to present annual reports, instead of biennial as before, the Shell-Fish Commissioners have prepared and herewith respectfully submit their report for the year ending September 30, 1896.

## THE COMMISSION.

The Commission consists of George C. Waldo of Bridgeport, Christian Swartz of Norwalk, and George W. Hallock of Danbury. It organized at its annual meeting in July, 1896, by the choosing of George C. Waldo as Chairman, and A. Mc. C. Mathewson, of New Haven, Clerk, in place of Frederick Botsford, Esq., whose services to the State, extending from the formation of the Commission, were appropriately acknowledged by a minute spread upon the records. During the year the Commission has moved its office from its former quarters in the Insurance Building, New Haven, to the new portion of the Exchange Building, on Chapel Street, where it has rooms Nos. 301-303, which are lighter and more easily accessible.

## THE FINANCIAL STATEMENT.

The financial statement this year is made to conform, in the matter of disbursements, to the books of the Comptroller's office, from which the statement is taken. As the bills for the month of September, in any year, are not made up and sent to the Comptroller until the first of October of that year, they are not audited at that office nor paid by the Treasurer until after that date, and are not, therefore, charged on the books of the State to the account of the year ending September 30th, but go over into the next year. Hereafter, and beginning with this report, it is thought best that the reports of disbursements, and the books of the office should correspond with the records of the Comptroller. In the present instance, the disbursements embrace those for September, 1895,

but exclude those for September, 1896, which go into the account of 1897. The difference in results is not essential, but there is no even seeming disagreement in the accounts of the two offices.

#### RECEIPTS AND DISBURSEMENTS.

The financial statement shows an excess of receipts over disbursements exceeding that of last year, and that, too, under conditions which have been exceptional with respect to the demands upon the funds of the office for certain expenses.

#### LANDMARKS.

In the matter of the preservation of landmarks the Commission has found it necessary to replace a considerable number of important stations, particular reference to which is made hereafter. Lightning, severe storms and the inevitable decay of time have compelled the entire or partial rebuilding of many, and thorough and substantial work, at a reasonable cost in every case, has made the sum total in this item larger than for many years. It is probable that for several years at least the State will not be put to much expense for keeping its landmarks in repair.

#### BUOYING NATURAL BEDS.

In the buoying of the natural oyster beds done by the Commission under the law of 1895, the uncertainties of the conditions are illustrated. The buoying is of value to the business and acceptable to all who work upon the natural beds or own beds contiguous to them, but it is expensive and the limit set by the State, at one-half of the money received for licenses to work upon the natural beds, in any one year, may in some years prove inadequate. During the present year, owing to unusually violent storms which have carried away the buoys, or through the action of many vessels which ran across them continually, where, as in some cases, they lie in the "traveled highway" the Commission has been called upon very frequently to reset and replace buoys upon important lines, and although they have not always thought best to answer such calls, yet they have done so in the busy season and when the preservation of the lines has seemed to them essential. This has drawn so heavily upon the funds at the disposal of the Commission, that for the current year 1897, there is little remaining, and but little buoying can be done unless relief is granted by a larger allowance for



the work or by allowing the limit to be regulated by the necessities of the case as is the rule with reference to mud dumping, the preservation of land marks, etc. The law calling for the buoying is mandatory and the Commissioners have felt under obligations to keep the natural beds which are designated in the law buoyed in as satisfactory a manner as possible, but unusual causes of disturbance during the year have made this a difficult matter and the limit of expenditure has been a serious trouble.

#### MUD DUMPING.

In mud dumping there has been exceptional activity and in complying with the law the commissioners have been put to an unusual expense, an expense, as this Commission has often stated in its reports, that does not seem legitimately to belong to this department. At the same time, as the law stands, the Shell Fish Commissioners must appoint and send out inspectors, certify to their bills at stated rates, and the expense is charged to the Commission. The prospect is that in the year 1897 there will be a continuation of activity in this business as appropriations made by Congress for the deepening of channels and the enlargement of harbors are to be expended, and inspectors will find more constant employment with proportional expense to the state.

#### MISCELLANEOUS.

The item of miscellaneous expenses is made up principally of the expenses of moving the office of the Commission in the spring, and of a careful revision of the tax lists, a work necessitated occasionally in the interests of both the state and the planters and the expense of which is provided for under Section 2338 of the Statutes of the State, revision of 1888.

#### SALES OF GROUNDS.

Since the issuing of the financial statement the commission has sold something over 800 acres of ground which helps materially to balance the additional expenses in buoy-setting, landmarks and mud-dumping, although it does not appear in the present financial account.

#### TAXATION.

With reference to the general subject of receipts and expenditures the commission would say that while the property owners in

the oyster business pay local taxes on all their property, just as other property owners do, they are taxed by the State in addition and specially, beside. It would seem that the money paid by the oyster business to the State on its special tax belongs, equitably, to the business itself and that whether it be used in buoying the natural beds, in paying for additional policing of the private beds, or in any other way to the advantage of the general oyster business that business has, to say the least, the first claim upon it. It has, naturally, been the custom of the commission to point with pride to the annual surplus which it has turned into the treasury of the State, after paying all its expenses, but it certainly seems that a business which pays for its franchises in the first place; makes them valuable at great risk and only by its industry, perseverance, intelligence and pluck; holds them with prejudice to no other industry or interest and at the expense of no other class of producers, is worthy of considerable consideration at the hands of the law-makers of the State.

#### THE LICENSING OF BOATS AND VESSELS.

With reference to the operation of the new laws passed at the session of 1895, the commissioners would say: The licensing of boats and vessels to work upon the natural beds has operated well and the use of those beds to the citizens of Connecticut in whose interests the State requires that they shall be maintained is promoted. The number of licenses is large, the details of the law are carefully carried out and its purposes secured.

#### THE CLOSE SEASON.

The law prescribing a close season on the natural oyster beds has worked well. The killing of "the goose that lays the golden egg" is an old story from which men have learned some wisdom and the fact that moderation at certain seasons is better in the end, for the interests of all, is a well established fact. The Commission is of the opinion that a lengthening of the season would be productive of still better results and that the hundreds who in a favorable season find the big natural beds a source of income and of well rewarded industry would be still better off by an addition of two weeks to the present limit of the close season. At the same

time the Commission is aware that the present law was the result of the wisdom and experience of the intelligent workers upon the natural beds and any movement for a change may safely be left to them.

The inspector of the natural beds, Mr. William A. Lewis of Bridgeport, was reappointed for the current year at the expiration of the first term, and has given excellent satisfaction, being a faithful and efficient officer.

Under the operation of the law appointing an inspector and by the licensing of the boats and vessels to work upon the natural oyster beds, the former complaints have almost entirely been done away with and the use of the beds is preserved to the persons legally entitled to it.

The same is true of the licensing of boats to work in the Housatonic River. The first Fish Warden appointed by the commission, Mr. Hine, has been succeeded by Mr. Charles S. Day, whose services are satisfactory and the law is effectively enforced.

#### OYSTER POLICE.

As the law establishing an oyster police passed at the session of 1895 was secured by the efforts of the Oyster-Growers' Association of the State, in carrying out the provisions of the law, the members of that association were consulted. Suggestions made by the association resulted in the adoption of a scheme which divides the entire oyster-growing territory of the State into sections, and apportion the money available in any one year, to each section in proportion to the aggregate of taxes paid to the State by that section. This is certainly a very equitable and judicious method of distributing the funds and has thus far worked to the seeming satisfaction of all concerned. The members of the association, through their officers in each section, have nominated to the board men of experience and good character for the position of policemen and these nominations have been confirmed by the board and such nominees have been duly appointed. In this way competent and reliable members of the oyster police have been secured.

The Commission is under obligation to the officers of the Oyster-Growers' Association for material assistance in this matter. Very few complaints of the operation of the system have been heard, and none of the police supervision.

## WORK ON THE NATURAL BEDS.

Owing to the severe storms which buried a portion of the natural oyster beds of the state, the work on them has not been this year as profitable as last. There was an excellent set of young oysters, both on the natural and private beds, and at the end of the close season, the large fleet of licensed boats was for several weeks doing exceedingly well. But storms of unusual severity and duration swept the Sound from the southeast and south, stirred the bottom to a great extent and carried large deposits of sand over the shallower portions of the beds. Only a small portion of the great Stratford and Bridgeport bed was left uncovered and of avail for work, and it is estimated that the catch this year will not exceed 500,000 bushels, in place of over a million a year ago. It will thus be seen that the risks and chances of the business are large and causes entirely beyond computation and against which no successful provision can be made, operate to overthrow the plans and shatter the prospects of the oystermen. About 500 acres only of the Stratford and Bridgeport bed are now in good condition out of over 3,000 acres, but the Fairfield and Roton Point and Fish Island beds are in fair condition.

## THE MAPS.

The maps of the natural beds, introduced into their report by the commissioners last year, have met with so much favor from the business generally that a more complete set has been provided this year, to which the commissioners call the special attention of all who inspect the report.

## REVERTING OF OYSTER GROUNDS.

Under the Act of 1895, providing for the reverting of the oyster grounds to the State, after the accumulation of unpaid taxes for a specified number of years, there has been action by the commissioners in a number of cases which will be found in a table elsewhere. The operation of the law is speedy and sure and the State secures in this way grounds that may hereafter become available through the improved methods of later cultivation. By the methods previously in use the cost of obtaining possession of the ground was often greater than its value when sold for taxes, but under the

present law the expense is almost nothing. Nearly all the grounds secured by the State under this law is susceptible of cultivation.

#### THE PLANTING THIS YEAR.

The plant on the private oyster beds this year has been large, as a reference to the table of material used will show. And here it is well to allude to a matter that is of importance to the business and that is the very large amount of dredged material used by intelligent oyster-growers in improving what had been considered heretofore worthless ground. The commission has sold ground that had previously been surrendered as worthless and this has been made productive by the depositing thereon of dredged material composed of a sufficient proportion of sand to harden the bottom to the right consistency. A field of operation is thus open to intelligent enterprise that promises to greatly enlarge the cultivated area of the oyster grounds of the State and to contribute largely to the aggregate value of the business. Areas which have been abandoned as useless are thus made valuable and a source of profit to the planter.

There was a very excellent set, as has been said, on cultivated beds, particularly to the eastward, and it has grown well and shows up very fairly with the promise of a good crop, if not ruined by unforeseen circumstances. "Stars" have appeared in some places but they no longer carry terror to the cultivator's heart as they once did, although now, as heretofore, "eternal vigilance is the price of oysters," to the cultivator.

#### OYSTER EXHIBITION.

This year, as last, the Commission made an exhibition at the Danbury Fair, through the instrumentality of Mr. D. C. Sanford, engineer, who gathered a collection of exceptional interest and value and one that attracted great attention. Henry C. Rowe, Esq., of New Haven, president of the Oyster-Growers' Association, had also an exhibit of great value at the Danbury Fair and, altogether, there was a large amount of interest shown in the business. The exhibit was subsequently taken to Bridgeport where it remained in the hall of the Public Library for a month and was visited by crowds of people, after which it was taken to Norwalk for a similar purpose. During its stay in Bridgeport, Mr. Sanford occupied one



evening in a talk upon its chief features, which was well attended and very satisfactory.

## LANDMARKS REPAIRED AND STATIONS REBUILT.

### THE HIGHLANDS.

The following is a detailed account of the landmarks replaced and repaired during the year :

At "The Highlands," so-called, on the east side of the entrance to Guilford Harbor, a pole nearly 70 feet high was struck by lightning and destroyed on July 5th, 1896. This pole, painted white, is visible at a great distance and is a very important signal. It was replaced with a substantial pole of the same character, painted white and firmly braced.

### "DRILL HOLE."

At "East Drill Hole," East Haven, a pole 30 feet in height, situated on the large rock at the east entrance to East Haven Harbor, was found to be decayed and partially destroyed and was rebuilt anew and properly painted.

### "SALT ROCKS."

A station on the "Salt Rocks," so-called, at Merwin's Point, Milford, had a large pole for a signal, which fell, through decay and the washing away of the stone ballast at its base. This station is being substantially rebuilt and will be in place probably early in January, 1897.

### PINE CREEK.

Pine Creek, Fairfield ; a pole 30 feet high was set in rock at high water mark in the Fall of 1894. It has been repainted and a quantity of large stones placed at its base to protect it from the action of the water in severe storms, and also to prevent its use as a "hitching post" by excursion parties.

### COCKENOE.

Cockenoe, Norwalk. This signal, which had become badly dilapidated was rebuilt, 30 feet in height, painted white inside and out. It is now a substantial and effective signal.



## COPPS.

Copps, Norwalk. This signal was also built over on the same plan as that at Cockenoe, 30 feet high and painted white.

## GOOSE ISLAND TREE.

Goose Island Tree, Norwalk. This signal, which was a cedar tree, was uprooted by a gale. It has been replaced by a 30 foot pole, properly braced and painted white.

## "RAM."

"Ram," Norwalk. This station was a cedar tree but it was removed. It had been used for sextant work and also for ranges. It has been replaced by a 30 foot pole, properly stayed, and painted white.

## CHIMON.

Chimon, Norwalk. This was old and decayed and fell to pieces in a storm. It was rebuilt new like the station on Cockenoe: 30 feet high, painted white.

## KNAPP ISLAND.

Knapp Island, Greenwich. This station, which was the gable to a watch house, has been removed, necessitating the replacing it with a signal of some other description. A 30 foot pole has been set up on the island, but a change of position made it necessary to relocate the station on the maps. The pole is stayed with iron rods leaded into the rocks, and is painted white.

## LITTLE CAPTAINS.

"Little Captains," Greenwich. This station had fallen through decay and the action of storms, and was rebuilt anew on the best model. A 31 foot pole, painted white, solidly set and stayed.

## AMERICUS,

"Americus," Greenwich. This station was the cupola of the old "Indian Harbor Hotel" and was removed. The east chimney of Hon. E. C. Benedict's new house has been chosen in its place and

will be used hereafter. This, of course, necessitated the replacing of the station on the maps.

It will thus be seen that the work on the preservation of landmarks has been unusually large during the past year, but in every case the commissioners are of the opinion that the work was needed and that the replacing or repairing has been well and economically done. The importance of these landmarks is great as no buoys can be set on public or private grounds for which they are used, without them and no accurate or reliable surveys made.

#### GROUND'S RETURNED TO THE STATE.

Under the statute of 1895 the following grounds have reverted to the State for the failure to pay the taxes due for five consecutive years or more :—

Roland G. Averill, Branford,	- - - - -	50.	acres.
W. F. Brooks, Westport,	- - - - -	35.	"
Theodore Clark, Greenwich,	- - - - -	42.	"
John Daly, Westport,	- - - - -	85.7	"
Henry R. Fitch, Stamford,	- - - - -	28.	"
Delos L. Franklin, Westport,	- - - - -	500.	"
Nelson Frisbie, Milford,	- - - - -	100.	"
George F. Galott, Fairfield,	- - - - -	103.3	"
William Godfrey, Norwalk,	- - - - -	46.	"
P. B. Husted, Stamford,	- - - - -	10.	"
Alex. Lutz, Greenwich,	- - - - -	16.	"
Estate of William McGuire, Greenwich,	- - - - -	12.	"
Daniel McNeil, New Haven,	- - - - -	40.	"
Lincoln Morse, Westport,	- - - - -	57.7	"
F. W. Shepard, Branford,	- - - - -	50.	"
Stannard & Moore, Westbrook,	- - - - -	119.5	"
Estate of D. L. Peck, Clinton,	- - - - -	50.	"
Charles H. Waterman, Westport,	- - - - -	146.6	"
Peter Henry Walsh, Greenwich,	- - - - -	4.1	"
J. A. Wicks, Orange,	- - - - -	50.	"
Thomas Wright, Fairfield,	- - - - -	50.	"
Total,	- - - - -	1,595.9	acres.

This ground is now open for application under the act.

## NUMBER OF BUOYS SET.

Under the law requiring the Commissioners to buoy the natural beds buoys were set as shown in the following table. This does not show, however, the number of times that the Commissioners were compelled to send out a steamer to set the buoys in line after they had been drawn out by passing vessels or scattered by a storm. The material used in making the buoys this year was the same as that used last, and the anchor stones were stronger, but the buoys did not last nearly as long, in some cases being eaten off by worms in a few days, which is another of the uncertainties incident to the work of buoying of the natural beds.

## BUOYS SET ON THE NATURAL OYSTER BEDS.

JUNE 17, 1896.

75 Buoys were set on the Stratford and Bridgeport Beds.

JULY 1, 1896.

8 Buoys were set on the Fairfield Bed.

JULY 8, 1896.

12 Buoys were set on the Fairfield Bed.

JULY 9, 1896.

12 Buoys were set on the Fish Island and Roton Point Beds.

JULY 13, 1896.

12 Buoys were set on the Fairfield Bed,

JULY 13, 1896.

8 Buoys were set on the Bridgeport and Stratford Beds.

SEPTEMBER 9, 1896.

53 Buoys were set on the Stratford and Bridgeport Beds.

SEPTEMBER 10, 1896.

15 Buoys were set on the Fairfield Beds.

SEPTEMBER 10, 1896.

28 Buoys were set on the Fish Island and Roton Point Beds.

SEPTEMBER 11, 1896.

15 Buoys were set on the Stratford and Bridgeport Beds.

OCTOBER 21, 1896.

15 Buoys were set on the Stratford and Bridgeport Beds.

OCTOBER 21, 1896.

12 Buoys were set on the Fish Island and Roton Point Beds.

Altogether making a total of 265 buoys set during the year.

THE OYSTER LAWS.

For several years there has been an increasing demand for the laws which govern the oyster business in the State of Connecticut, but few people care to buy the bulky volume of the revision of 1888 with the subsequent issues of the annual blue book necessary to secure a complete set of those laws. The demand has been from the prominent men in the business in the State as well as from the officials of other States on the Atlantic and Pacific seaboards. To answer this demand the commission has issued in the present report a complete set of the laws of the State governing the commission and having to do with the grounds exclusively within State jurisdiction. These laws have been carefully compiled by A. Mc. C. Mathewson, Esq., clerk of the board, and the Commission feels sure will meet the demand which has long been unsupplied in connection with the oyster business of Connecticut.

GEORGE C. WALDO,  
CHRISTIAN SWARTZ,  
GEORGE W. HALLOCK,  
*Commissioners.*

## FINANCIAL STATEMENT

OF THE SHELL-FISH COMMISSIONERS FOR THE YEAR ENDING SEPTEMBER  
30, 1896.

## RECEIPTS.

Taxes Collected, - - -	\$8,786 45
Deeds of New Oyster Grounds, -	184 10
Boat Licenses, - - -	860 50
Boat Licenses in Housatonic River, -	262 00
Recording Deeds, - - -	40 80
Blank Books, - - -	2 40
Total Transmitted to State Treasurer,	<u>\$10,136 25</u>

## DISBURSEMENTS.

Pay and Expense of Commissioners, -	\$1,750 00
Frederick Botsford, Salary as Clerk, -	1,291 67
A. Mc. C. Mathewson, Salary as Clerk,	208 33
State Auditors, - - -	100 00
Engineers' Department, - - -	252 25
Preservation of Landmarks, - - -	475 64
Office Expenses, - - -	504 78
Buoying Natural Oyster Beds, -	570 83
Inspection of Mud Dumping, -	797 44
Inspection of Natural Oyster Beds, -	400 00
Oyster Police, - - -	1,640 49
Miscellaneous Expenses, - - -	329 43
	<u>\$8,320 86</u>

## LIST OF OYSTER STEAMERS USED IN CONNECTICUT WATERS, 1895-6.

NAME.	TONNAGE.		CAPACITY.	OWNER.	LOCALITY.
	GROSS.	NET.	BUSHELS.		
Kittie.....	.....	.....	350	T. H. Buftham.....	New York.
Falcon.....	46.18	23.09	700	J. & J. W. Ellsworth.....	New York.
Lizzie E. Woodend.....	67.69	42.45	1,000	Van Name Bros.....	New York.
J. P. Mesereau.....	.....	.....	1,500	Daniel Burbank.....	New York.
Lizzie H.....	34.65	24.50	1,600	Jacob I. Housman.....	New York.
Mystery.....	97.93	72.57	2,000	D. K. Cole.....	New York.
Harry.....	77.33	50.22	2,500	Peter Androvette.....	New York.
Daisy.....	.....	.....	1,000	C. S. Mott.....	Patchogue.
Precursor.....	99.66	34.83	1,000	Port Jefferson Oyster Co.....	Port Jefferson
.....	.....	.....	.....	A. Pauch.....	Greenwich.
H. S. Lockwood.....	69.50	34.75	1,000	E. F. Lockwood.....	Greenwich.
Ithiel.....	31.93	15.97	800	Chas. E. Palmer.....	Greenwich.
Susie.....	.....	.....	100	W. A. Cumming.....	Stamford.
Ripple.....	36.30	18.10	900	D. B. Decker.....	Norwalk.
Adeline.....	20.07	7.33	300	S. B. Reed.....	Norwalk.
J. Howard Lowndes.....	72.07	36.84	1,500	S. H. Lowndes.....	Norwalk.
Waneta.....	19.89	9.95	500	Gould Hoyt.....	Norwalk.
Cereus.....	16.57	8.29	400	Chas. H. Vroom.....	Norwalk.
Addie V.....	21.27	11.88	500	William Verity.....	Norwalk.
Laurel.....	41.00	20.50	400	A. Solomons.....	Norwalk.
Edith A.....	30.00	15.50	400	Joseph and Charles Vroom.....	Norwalk.
Freddie W. Decker.....	20.00	14.36	800	Peter Decker.....	Norwalk.
Mildred.....	.....	.....	3,000	Wm. H. Hoyt & Son.....	Norwalk.
C. B. Lowndes.....	28.43	14.22	1,400	C. T. Lowndes.....	Norwalk.
Henry J.....	42.42	26.96	1,200	T. S. Lowndes.....	Norwalk.
Flora.....	20.49	10.25	500	A. D. Corson.....	Norwalk.



NAME.	TONNAGE.		CAPACITY. BUSHELS.	OWNER.	LOCALITY.
	GROSS.	NET.			
Mabel Stevens.	31.74	21.12	1,200	W. I. Stevens.	Norwalk.
Kate C. Stevens.	104.65	52.33	2,500	W. I. Stevens.	Norwalk.
Medea.	54.02	27.01	1,000	H. Rowland.	Norwalk.
Josephine.	85.89	42.95	2,000	Craw & L'Hommedieu.	Norwalk.
F. C & A. E. Rowland.	55.78	26.82	1,000	D. K. Cole.	Norwalk.
D. K. Cole.	31.87	15.94	300	Sands Selleck.	Norwalk.
Carrie V.			200	Geo. N. Warren.	Norwalk.
Molly.	29.36	19.44	200	C. W. Bell.	Norwalk.
Alberta.	23.78	13.28	500	B. Frank and Chas. F. Howell.	Norwalk.
Daisy.	6.21	5.61	300	Nassau Oyster Co.	Southport.
Ostrea.	97.99	70.60	1,500	M. E. Morris.	Bridgeport.
Star Fish.	18.08	9.04	300	M. E. Morris.	Bridgeport.
Jessie Clayton.	56.23	28.17	1,200	M. E. Morris.	Bridgeport.
Wm. H. Hoyt.	91.02	45.51	2,000	Stratford Oyster Co.	Bridgeport.
Bond & Carrier.	94.86	66.63	1,400	Clark & Bond.	Bridgeport.
Fred. F. Brown.	41.74	29.36	800	Henry J. Lewis.	Bridgeport.
Florence.	84.86	64.60	1,200	Henry J. Lewis.	Bridgeport.
C. S. Conklin.	52.96	34.15	950	Henry J. Lewis.	Bridgeport.
Virginia.	83.10	46.50	1,000	Henry J. Lewis.	Bridgeport.
Dreadnought.	71.83	48.56	800	Pher F. West.	Bridgeport.
Active.	59.74	40.09	900	Pher F. West.	Bridgeport.
Flash.	6.00	4.00	300	Frank Hitchcock.	Bridgeport.
Etta May.	99.55	49.78	1,300	May Oyster Co.	Bridgeport.
Lorette.	19.06	9.93	800	W. M. Merwin & Sons.	Milford.
W. M. Merwin.	64.21	35.14	1,000	W. M. Merwin & Sons.	Milford.

## LIST OF OYSTER STEAMERS USED IN CONNECTICUT WATERS, 1895-6.

NAME.	TONNAGE.		CAPACITY.	OWNER.	LOCALITY.
	GROSS.	NET.	BUSHELS.		
W. A. Cumming.....	76.17	40.84	1,100	W. M. Merwin & Sons.....	Milford.
Jessie R.....	.....	14.92	500	W. M. Rowland.....	New Haven.
Spark.....	22.15	10.08	200	C. D. Parmelee.....	New Haven.
Pioneer.....	44.37	24.19	400	Ludington & Palmer.....	New Haven.
Luzerne Ludington.....	74.27	37.14	1,000	Ludington & Palmer.....	New Haven.
W. H. Lockwood.....	48.94	29.71	1,000	H. C. Rowe & Co.....	New Haven.
Gordon Rowe.....	57.99	29.00	1,000	H. C. Rowe & Co.....	New Haven.
Ruel Rowe.....	147.85	73.93	2,400	H. C. Rowe & Co.....	New Haven.
Mikado.....	76.92	51.33	900	J. Smith & Son's.....	New Haven.
Daisy E. Smith.....	61.68	30.84	1,200	J. Smith & Son's.....	New Haven.
Jeremiah Smith.....	113.38	66.28	2,300	J. Smith & Son's.....	New Haven.
Enterprise.....	34.00	20.65	800	Hulse & Dunbar and Lancraft Bros.	New Haven.
Isaac E. Brown.....	85.68	56.17	1,400	I. E. Brown.....	New Haven.
Ivernia.....	13.35	6.68	900	J. E. Bishop & Co.....	New Haven.
James Morgan.....	35.99	27.80	900	American Oyster Co.....	New Haven.
Emily Mansfield.....	66.28	47.82	1,200	F. Mansfield & Sons.....	New Haven.
J. & G. H. Smith.....	42.53	21.26	800	G. H. Smith.....	New Haven.
J. & P. Thomas.....	79.02	48.48	1,500	Thomas Thomas.....	New Haven.
Smith Brothers.....	64.74	48.74	1,600	Smith Bros.....	New Haven.
Amanda.....	74.53	37.27	1,300	Lancraft Brothers.....	New Haven.
Richard W. Law.....	113.62	56.81	2,000	Richard W. Law.....	New Haven.
H. A. Barnes.....	64.82	43.34	1,500	Barnes & Lane.....	New Haven.
Pansy.....	10.80	10.00	400	Stoney Creek Oyster Co.....	Stoney Creek.
Jennie.....	18.99	14.62	300	G. M. Long & Co.....	New London.
M. Dewing.....	71.47	51.47	1,000	M. Dewing.....	Providence.

# Alphabetical List of Owners of Oyster Ground

WITHIN THE JURISDICTION OF THE STATE, WITH THE NUMBER OF ACRES OWNED BY EACH, AS SHOWN BY THE BOOKS OF THE SHELL FISH COMMISSION ON NOVEMBER 1, 1893, THE DATE OF THE LAST COMPLETED TAX LIST.

NAME.	TOWN.	ACRES.
Alling, H & W. E.....	New Haven.....	210.7
American Oyster Co.....	New Haven.....	991.3
Atwood & Higgings.....	Boston, Mass.....	200.0
Atwood, H. K.....	Boston, Mass.....	349.4
Armstrong, C. H.....	Bridgeport.....	52.9
Armstrong, D. N.....	Bridgeport.....	48.2
Arsant, Franceline.....	Greenwich.....	10.
Backus, Harley C.....	New Haven.....	200.
Ball, Ernest C.....	New Haven.....	350.
Banks, Mark.....	Greenwich.....	2.
Barmore, H. W.....	Greenwich.....	17.
Barnes & Lane.....	New Haven.....	733.
Beardsley & Higby.....	Milford.....	800.
Beardsley, A. J. & Son.....	Bridgeport.....	267.
Beardsley, F. J.....	Stratford.....	23.5
Beardsley, Frederick S.....	Stratford.....	317.
Beers, Hon. A. B.....	Bridgeport.....	174.3
Bell, Chas.....	Southington.....	700.
Bell, Chas. W.....	Norwalk.....	325.
Bell, Hiram, Estate.....	Norwalk.....	10.
Bell & White.....	Norwalk.....	120.
Bededict, Thos. E.....	New Haven.....	290.
Bohner, J. J.....	Brooklyn, N. Y.....	40.
Bond & Clark.....	Bridgeport.....	500.2
Bradley, I. L. & J. L.....	New Haven.....	12.
Bradley & Platt.....	Orange.....	47.5
Brooks, T. D. & B. S.....	Danbury.....	50.6
Brown & Houche.....	Groton.....	19.5
Brown, Isaac E.....	New Haven....	1,067.9
Brown, James N.....	Guilford.....	21.7
Brown & Halverson.....	Bridgeport.....	159.4
Brundage, J. C.....	Greenwich.....	8.
Bryan, Wm.....	Branford.....	100.
Bunnell, Chas. W.....	New Haven.....	40.
Carried forward....		8,328.1

NAME.	TOWN.	ACRES.
	Brought forward...	8,328.1
Burnell, Merritt W.....	New Haven.....	570.3
Butler, Herbert M.....	Auburn, R. I.....	65.2
Byxbee, Silas B.....	Norwalk.....	34.
Byxbee, Samuel, Estate.....	Norwalk.....	10.
Cadmus, John.....	Woodhaven, L. I....	46.3
Callahan, Eugene A.....	New Haven.....	10.5
Case, Elmer E.....	Norwalk.....	45.6
Case, Wm. H.....	Norwalk.....	10.
Chard, Samuel.....	Greenwich.....	197.
Chard David B. Estate.....	Greenwich.....	28.4
Clark & Bond.....	Bridgeport.....	478.
Cook, Oliver.....	Norwalk.....	205.
Cole, Hickson W.....	Norwalk.....	28.
Collinge, John, Estate.....	Greenwich.....	16.
Craw & L'Hommedieu.....	Norwalk.....	2,056.4
Creegan, T. J.....	New Haven.....	174.
Crockett, Alfred S.....	Norwalk.....	2.
Crockett, Julia L.....	Norwalk.....	12.1
Crofut & Waters.....	Darien.....	476.
Cumming, Thomas.....	Stamford.....	35.7
Cumming, W. A. & Thos.....	Stamford.....	500.7
Cumming, William A.....	Stamford.....	295.
Dayton, Geo. W.....	New Haven.....	101.8
Dayton, John.....	Greenwich.....	2.
Dayton, John & Sons.....	Greenwich.....	221.5
Davis, Chas. W.....	Portchester.....	7.7
Davis, Geo. N.....	Norwalk.....	6.
Decker, Abraham.....	Norwalk.....	156.
Decker, David B.....	Norwalk.....	68.7
Decker & Raymond.....	Norwalk.....	204.4
Decker, John.....	Stamford.....	10.
Decker, Josephine J....	Norwalk.....	44.4
Decker, Peter D.....	Norwalk.....	320.
Decker, Sylvester P.....	Norwalk.....	146.
Delano, John L.....	Portchester.....	3.
Delano, Thos. H.....	New York.....	24.
DeWaters, John H.....	Norwalk.....	131.
DeWaters & Stevens.....	Norwalk.....	151.
Denning, Martin.....	Milford.....	300.
Dibble, Alphonso.....	Norwalk.....	115.8
Dibble, R. B.....	Norwalk.....	2.
Dibble, Stephen E.....	Norwalk.....	10.
Dorman, B. L.....	Greenwich.....	6.
	Carried forward....	16,660.6

NAME.	TOWN.	ACRES.
	Brought forward...	16,660.6
Eaton, Chas. N.....	New Haven.....	135.1
Elley, Janet.....	New Haven.....	89.
Ellsworth, J. & J. W.....	New York.....	461.6
Farwell, Geo.....	Portchester.....	4.
Farwell, James.....	Portchester.....	19.1
Farwell, John.....	Portchester.....	18.
Ferris, Geo. W.....	Greenwich.....	10.
Finiels, Louis.....	Greenwich.....	72.
Forbes, C. B.....	Guilford.....	23.
Ford, Adolphus I.....	Greenwich.....	25.
Ford & Ryle.....	Stamford.....	78.7
Ford, Claudia M.....	Greenwich.....	25.
Ford, Elbert M.....	Milford.....	164.
Ford, Brown.....	Bridgeport.....	103.3
Fordham, H. & Son.....	Greenport, L. I.....	118.
Fordham & Bell.....	Southington.....	100.
Fordham, Henry C.....	Stratford.....	50.
Fowler, John W.....	Milford.....	400.
Franklin, Zelus E., Estate.....	Milford.....	100.
Gager, Hans.....	Norwalk.....	10.
Garry, Mary O.....	Stratford.....	47.
Geib, A. A. & H. P.....	Norwalk.....	305.
Glabn, Miss Anna W. Von.....	New Haven.....	34.3
Godfrey, E. W.....	Norwalk.....	33.4
Goodsell & Miller.....	Bridgeport.....	171.7
Grindle, Richard H.....	New Haven.....	245.
Guilford Oyster Co.....	Boston.....	822.8
Hamilton, A. E.....	New Haven.....	33.
Hart & Raymond.....	Norwalk.....	15.5
Hassan, E. J.....	East Haven.....	14.7
Heath, Andrews.....	Norwalk.....	38.
Hilton, H. R.....	Norwalk.....	40.
Hollins, F.....	.....	12.
Hollins & Ott.....	Norwalk.....	26.9
Holly, Newman.....	Portchester.....	11.5
Hopkins, C. F.....	Greenwich.....	4.
Hopkins, Judson W.....	Greenwich.....	20.
Hotchkiss, W. T.....	New York.....	73.
Howell, B. Frank.....	Norwalk.....	51.6
Hoyt, Charles W. & Son.....	Bridgeport.....	165.4
Hoyt, Gould.....	Norwalk.....	24.7
Hoyt, James F.....	Norwalk.....	30.
Hoyt, W. F.....	Norwalk.....	29.7
	Carried forward....	20,710.5



NAME.	TOWN.	ACRES.
	Brought forward...	20,710.5
Hoyt, Wm. H & Son.....	Norwalk .....	1,524.0
Husted, G. F., Estate.....	Greenwich.....	50.
Husted, J. E.....	Greenwich.....	5.
Hull, Chas. P., Estate.....	Minneapolis.....	105.8
Hull, Louis K.....	Greenwich.....	105.
Hulse & Dunbar.....	New Haven.....	115.
Hulse, Wm. C.....	Norwalk .....	20.
Hurd, Chas. A.....	Bridgeport.....	86.6
Hynard & Marshall.....	Greenwich.....	5.
James, Wm.....	.....	318.
Johnson, H. St. Clare, Estate...	New Haven.....	107.
Jones & Thomas.....	New Haven.....	86.
Judson & Whiting.....	Stratford.....	42.5
Lafoe, W. E.....	New Haven.....	22.4
Lancraft Bros.....	New Haven.....	1,078.9
Lane Linsley.....	New Haven.....	60.
Lane, Fred A.....	New Haven.....	30.
Lane, Frank T.....	New Haven.....	305.
Lane, F. T. & F. A.....	New Haven.....	108.
Law, J. H. & S. B.....	New Haven.....	262.
Law, R. W.....	New Haven.....	219.5
Law, R. W., Jr.....	New Haven.....	175.
Lewis, Henry J.....	Stratford.....	8,454.2
Livearman, W. W.....	Darien.....	21.6
L'Hommedieu, J. S.....	Norwalk .....	10.
Lockwood & Hopkins.....	Greenwich.....	42.
Lockwood, Elbert F.....	Greenwich.....	1,353.8
Lockwood, S. B.....	Greenwich.....	8.
Lockwood, Theron W.....	Greenwich.....	13.6
Lowndes, Chas. T.....	Norwalk .....	90.
Lowndes, John Henry.....	Norwalk .....	13.6
Lowndes, Stanley H.....	Norwalk .....	500.6
Lowndes, Theo. S.....	Norwalk .....	788.
Ludington, Palmer & Eaton...	New Haven.....	50.
Ludington & Palmer.....	New Haven.....	441.
Mallory, Geo. W.....	New Haven.....	150.
Mallory & Ball.....	New Haven.....	366.6
Matlby, C. S., Estate.....	Greenwich.....	20.9
Mansfield, F. & Sons.....	New Haven.....	927.
Marshall, Benj.....	Stamford.....	15.
Marshall, Enoch & Sons.....	Stamford.....	39.
Marshall, W. F. & E.....	.....	181.
Marshall, Wilmot & Starkins....	Greenwich.....	95.2
	Carried forward....	39,222.3



NAME.	TOWN.	ACRES.
	Brought forward...	39,222.3
Martin, Geo. W. & Son.....	Portchester, N. Y...	91.
Martin, Henry J.....	Portchester, N. Y...	6.3
May Oyster Co .....	Bridgeport.....	1,429.3
McCrodden, Rowland & Redfern.	Canarsie .....	96.3
McGuinness, John.....	Stamford.....	30.4
McNeil Bros.....	New Haven.....	171.
Mead, Daniel S., Jr., Estate.....	Greenwich.....	114.5
Mead, Samuel.....	Norwalk.....	3.1
Meeks, Mrs. Peter A.....	New Haven.....	50.
Merwin, Francis E.....	Norwalk.....	4.5
Merwin, Samuel O.....	New Haven.....	64.6
Merwin, Wm. M. & Sons.....	Milford.....	1,948.
Miller, Anderania.....	New Haven.....	117.
Miller, Bogart.....	Stratford.....	299.
Mills, E. B. & Co.....	Fairfield .....	51.6
Moe, Wm. G.....	Norwalk.....	1.5
Moore, N. W., Estate.....	New Haven.....	10.
Moore, William.....	Norwalk.....	51.
Morgan, H. P.....	Norwalk.....	5.
Morris, Julia A.....	New Haven.....	2.1
Morris, Louis S.....	Bridgeport.....	150.
Morris, Mrs. Margaret E.....	Bridgeport.....	109.
Morris, Marshall E.....	Bridgeport.....	1,214.2
Nash, Chas. J.....	Black Rock.....	38.8
Nassau Oyster Co.....	Fairfield .....	178.4
Newton, Henry G.....	New Haven.....	54.7
Newman, Chas.....	Greenwich.....	14.1
Newman, Oscar.....	Greenwich.....	10.1
Page, John.....	New Haven.....	101.2
Palmer, B. F.....	Greenwich.....	74.5
Palmer, Chas. E.....	Greenwich.....	182.
Palmer, Mary L.....	Greenwich.....	22.
Palmer, Clarence E.....	Sound Beach.....	20.
Palmer, Geo. A.....	Greenwich.....	48.2
Palmer, H. Ferris.....	Greenwich.....	18.
Palmer, Joseph G., Estate.....	Greenwich.....	64.4
Palmer, M. K. & H. J.....	Greenwich.....	20.
Palmer, Ralph A.....	Meriden.....	130.
Parmlee, C. D.....	New Haven.....	787.9
Parmlee, R. H.....	Norwalk.....	16.
Paush, Albert.....	Hartford.....	88.9
Peet, Benj. F.....	Fairfield .....	55.5
Peters, Harry.....	Portchester.....	8.
	Carried forward....	47,275.4

NAME.	TOWN.	ACRES.
	Brought forward...	47,275.4
Pfuderer, Chas. L., Estate.....	New Haven.....	10.5
Plander, John H.....	Norwalk.....	2.
Post, G. E. & A. D.....	Keyport, N. J.....	121.8
Potter, Isaac L.....	New Haven.....	36.
Prior A. M.....	Stamford.....	5.1
Raymond, Geo. W.....	Norwalk.....	10.
Raymond, Robert A.....	Darien.....	25.
Reynolds, W. S.....	Greenwich.....	7.9
Reed, Wm. B.....	Norwalk.....	6.
Roberts, John.....	Norwalk.....	96.
Roberts, Nathan.....	Norwalk.....	12.
Roberts, Wm. O.....	Norwalk.....	12.
Rowe, B. N. & E. C.....	New Haven.....	12.
Rowe, Henry C.....	New Haven.....	8,756.7
Rowland, W. M. & C.....	New Haven.....	325.
Royden, Wallace N.....	Milford.....	30.
Sanford, P. G.....	Westport.....	387.
Schmeelk, H. W., Jr.....	Canarsie.....	112.
Searls, L. W.....	New York.....	24.
Seeley, C. Barnum.....	Bridgeport.....	10.
Selleck, Sands.....	Norwalk.....	33.8
Selleck & Webb.....	Norwalk.....	12.7
Simmell, Francis X.....	Greenwich.....	24.
Smith Bros.....	Norwalk.....	100.
Smith & Benedict.....	New Haven.....	20.
Smith & Lane.....	New Haven.....	146.
Smith, Geo. H.....	New Haven.....	416.1
Smith, J. & Sons.....	New Haven.....	2,769.2
Smith, Mrs. Julia.....	New Haven.....	38.
Smith, S. F. & W. M.....	New Haven.....	100.
Smith, M. P. & R. T.....	New Haven.....	200.
Smith Bros.....	New Haven.....	671.
Solmans, Alden.....	Norwalk.....	856.1
Starkins, Samuel.....	Greenwich.....	74.5
Stevens, Aaron G.....	Norwalk.....	81.3
Stevens, A. G. & G. W.....	Norwalk.....	4.
Stevens, Geo. W.....	Norwalk.....	17.5
Stevens, Wm. I.....	Norwalk.....	2,060.3
Stony Creek Oyster Co.....	Branford.....	138.3
Stratford Oyster Co.....	Stratford.....	1,061.9
Taylor, Hiram B.....	Norwalk.....	49.
Thomas, John.....	New Haven.....	6.
Thomas, Thomas.....	New Haven.....	149.
	Carried forward....	66,305.1

NAME.	TOWN.	ACRES.
	Brought forward...	66,305.1
Thomes, Chas. F.....	Norwalk .....	96.
Thompson, Chas. E.....	New Haven.....	150.
Thompson & Bishop.....	New Haven.....	50.
Thompson, J. E.....	New Haven.....	100.
Tomlinson, Chas. A.....	Milford .....	200.
Townsend, Brown & Rowe.....	New Haven.....	98.
Townsend, Chas. H.....	New Haven.....	204.
Townsend, Geo. H.....	New Haven.....	954.7
Traverse, H. I.....	Portchester.....	7.
Traverse, Isaac M.....	Portchester.....	31.
Turpin, Emma L.....	Bridgeport.....	295.1
Tuthill, Alva B.....	Norwalk .....	179.
Van Wyen, John.....	Islip, L. I. ....	200.
Vroom, Joseph.....	Norwalk .....	69.6
Ward, W. W.....	Orange .....	750.
Warren & Decker.....	Norwalk .....	80.
Webb, Henry L.....	Norwalk .....	1.
Webb & Lynch.....	Darien.....	34.3
Wedmore & Barnes.....	New Haven.....	51.4
Wedmore & Rowe.....	New Haven.....	50.
Wedmore & Tuttle.....	New Haven... ..	100.
Wells & Mead.....	Norwalk .....	83.3
West, P. F.....	Bridgeport.....	222.6
Westcott & Horton.....	Greenwich.....	16.
Whalley, Wm. L.....	Greenwich.....	10.
Wheeler, Frank.....	Meriden.....	400.
White, Merrill.....	New Haven.....	104.
Wicks & Bassett.....	Norwalk .....	20.5
Wicks, Daniel P.....	Norwalk .....	6.
Wicks, Geo. A. Hester.....	Norwalk .....	8.5
Wicks, Julia A.....	Norwalk .....	50.
Wiggins, Floyd E.....	New Haven.....	48.8
Williamson, Geo.....	Norwalk .....	6.
Willmott, Wm. H. & J. M.....	Darien .....	36.9
	Total .....	71,018.8

## AMOUNT OF MATERIAL PUT ON OYSTER BEDS BY CULTIVATORS FOR THE SET OF 1896.

CULTIVATORS.	LOCALITY.	No. Bushels Shells Planted.	No Bushels Crushed Stone Planted.	No. Bushels Long Island Gravel Planted.	No. Bushels of Gravel and Sand Dredged and Planted.	No. Bushels of Bridge-port Natural Bed Set of 18.6.	Total Number of Bushels Planted.
American Oyster Co.	New Haven	60,000					60,000
Ball, Ernest E.	New Haven	30,000					30,000
Barnes & Lane	New Haven	35,000					35,000
Bell, Chas. W.	Norwalk	6,000					6,000
Benedict, Thos. E.	New Haven	200					200
Bishop, J. E. & Co.	New Haven	10,000					10,000
Bond & Clark	Bridgeport	16,265					16,265
Brown, Isaac E.	New Haven	25,000			499,903		524,903
Brown & Ford	Bridgeport	2,000					2,000
Brown, Miller & Goodsell.	Bridgeport				542,500		524,500
Brown & Parmelee.	New Haven				398,846		398,846
Burwell, M. W.	New Haven	14,000					14,000
Byxbee, Silas B.	Norwalk	1,200					1,200
Case, Elmer E.	Norwalk	500					500
Case, Wm. H.	Norwalk	500				1,200	6,200
Chard, Samuel.	Greenwich	5,000				1,000	1,500
Cook, Oliver.	Darien						
Cole, Hickson, W.	Norwalk	1,500					1,500
Craw & L'Honnmedieu.	Norwalk	10,000	8,500		65,100		83,600
Cumming, William A.	Stamford					6,248	6,248
Dayton, Geo. W.	New Haven	5,000					5,000
Decker, David B.	Norwalk	18,000	1,600			2,275	13,875
Decker, Peter D.	Norwalk	10,000	8,000				18,000
Decker & Raymond.	Norwalk	5,000					5,000
	Carried forward	247,165	18,100		1,506,249	10,723	1,782,337

AMOUNT OF MATERIAL PUT ON OYSTER BEDS BY CULTIVATORS—CONTINUED.

OF THE STATE OF CONNECTICUT.

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CULTIVATORS.	LOCALITY.	No. Bushels Shells Planted.	No. Bushels Crushed Stone Planted.	No. Bushels Long Island Gravel Planted.	No. Bushels of Gravel and Sand Dredged and Planted.	No. Bushels of Bridgeport Natural Bed Set of 1896.	Total Number of Bushels Planted.
Brought forward		247,165	18,100		1,506,349	10,723	1,782,337
DeWaters, John H.	Norwalk	5,000					5,000
DeWaters & Stevens	Norwalk	6,000					6,000
Denning, Martin	Milford	25,000				1,500	26,500
Ellsworth, J. & J. W.	New York	10,000				8,000	18,000
Farwell, Geo.	Portchester	300					300
Farwell, James	Portchester	400					400
Farwell, John	Portchester	800					800
Ford, Adolphus I.	Greenwich	2,000					2,000
Ford & Merwin	Milford	10,000			108,500	2,500	121,000
Geib, A. A. & H. P.	Norwalk	3,890					3,890
Glahn, Miss Anna W., Von	New Haven	12,000					12,000
Heath, Andrew	Norwalk	1,000				200	1,200
Hemmingway & Potter	New Haven	14,000					14,000
Hilton, H. R.	Norwalk					3,000	3,000
Howell, B.	Norwalk	500					500
Hoyt, Gould	Norwalk	6,000				500	6,500
Hoyt, W. F.	Norwalk	1,000				600	1,600
Hoyt, Wm. H. & Son	Norwalk	75,000			108,500		183,500
Hulse & Dunbar	New Haven	20,000					20,000
Hurd, Chas. A. & Co.	Bridgeport	3,000					3,000
James, Wm.	New Haven	6,000					6,000
Lancraft Bros.	New Haven	100,000					100,000
Lane & Linsley	New Haven	10,000					10,000
Carried forward		559,055	18,100		1,723,349	27,023	2,327,527



## AMOUNT OF MATERIAL PUT ON OYSTER BEDS BY CULTIVATORS—CONTINUED.

CULTIVATORS.	LOCALITY.	No. Bushels Shells Planted.	No. Bushels Crushed Stone Planted.	No. Bushels Long Island Gravel Planted.	No. Bushels of Gravel and Sand Dredged and Planted.	No. Bushels of Bridgeport Natural Bed Set of 1896.	Total Number of Bushels Planted.
Brought forward		559,055	18,100		1,723,349	27,023	2,327,527
Lane, Frank T.	New Haven	1,200					1,200
Lane, F. T. & F. A.	New Haven				104,637		104,637
Law, J. H. & S. B.	New Haven	10,000					10,000
Law, R. W.	New Haven	13,000					13,000
Law, R. W., Jr.	New Haven					5,000	5,000
Law, S. B.	New Haven					5,000	5,000
Lawson & Martineau	Norwalk	3,000					3,000
Lewis, Henry J.	Stratford	126,611	24,760		215,177		366,548
Lockwood, Elbert F.	Greenwich	65,000					65,000
Lockwood & Hopkins	Greenwich	3,000					3,000
Lowndes, Chas. T.	Norwalk					20,000	20,000
Lowndes, Stanley H.	Norwalk	20,000				30,000	50,000
Lowndes, Theo. S.	Norwalk					10,000	10,000
Ludington & Palmer.	New Haven	30,000					30,000
Mallory & Ball.	New Haven	6,000					6,000
Mansfield, F. & Sons.	New Haven	95,000					95,000
Martin, Geo. W. & Son.	Portchester	1,000					1,000
May Oyster Co.	Bridgeport	30,000		4,800			34,800
McGuinness, John.	Stamford	1,000					1,300
McNeil Bros.	New Haven	5,000				300	5,300
Merwin, Wm. M. & Sons.	Milford	70,000			434,000		504,000
Morris, Louis S.	Bridgeport	10,000					10,000
Morris, Marshall E.	Bridgeport	35,000					246,705
Carried forward		1,083,866	42,860	4,800	2,688,870	97,623	3,918,019



# AMOUNT OF MATERIAL PUT ON OYSTER BEDS BY CULTIVATORS—CONTINUED.

OF THE STATE OF CONNECTICUT.

29

CULTIVATORS.	LOCALITY.	No. Bushels Shells Planted.	No. Bushels Crushed Stone Planted.	No. Bushels Long Island Gravel Planted.	No. Bushels of Gravel and Sand Dredged and Planted.	No. Bushels of Bridgeport Natural Bed Set of 1896.	Total Number of Bushels Planted.
Nassau Oyster Co.....	Brought forward	1,083,866	42,860	4,800	2,688,870	97,623	3,918,019
Palmer, B. F.....	Fairfield	22,000	.....	.....	.....	.....	22,000
Palmer, Chas. E.....	Greenwich	10,000	.....	8,000	16,275	10,500	44,775
Palmer, Geo. A.....	Greenwich	6,000	.....	4,000	4,340	.....	14,340
Palmer, M. K. & H. J.....	Greenwich	.....	.....	.....	.....	1,500	1,500
Parmelee, C. D.....	Greenwich	4,000	.....	.....	.....	6,000	11,200
Paush, Albert.....	New Haven	30,000	.....	1,200	.....	.....	30,000
Prior, A. M.....	Hartford	25,000	.....	.....	542,500	.....	571,300
Rowe, B. N. & E. C.....	Stamford	2,000	.....	.....	.....	1,000	3,000
Rowe, Henry C.....	New Haven	6,000	.....	.....	.....	.....	6,000
Rowland, W. M. Co.....	New Haven	221,250	.....	.....	2,109,240	.....	2,330,490
Royden, Wallace N.....	New Haven	30,000	.....	.....	.....	.....	30,000
Selleck, Sands & Son.....	Milford	2,000	.....	.....	.....	.....	2,000
Smith Bros.....	Norwalk	4,500	.....	.....	.....	.....	4,500
Smith Bros.....	Norwalk	10,000	.....	.....	.....	.....	10,000
Smith, Geo H.....	New Haven	80,000	.....	.....	.....	.....	80,000
Smith J. & Sons.....	New Haven	60,000	.....	.....	.....	.....	60,000
Smith, M. P. & R. T.....	New Haven	200,000	.....	.....	.....	25,000	225,000
Smith, S. F. & W. M.....	New Haven	30,000	.....	.....	.....	.....	30,000
Solomans, Alden.....	New Haven	32,000	.....	.....	.....	.....	32,000
Starkins, Samuel.....	Norwalk	30,000	.....	.....	108,500	.....	138,500
Stevens, Aaron G.....	Greenwich	1,000	.....	.....	.....	500	1,500
Stevens, A. G. & G. W.....	Norwalk	3,000	.....	.....	.....	.....	3,000
Carried forward	Norwalk	3,000	.....	.....	.....	.....	3,000
		1,895,616	42,860	18,000	5,469,725	145,923	7,571,924

## AMOUNT OF MATERIAL PUT ON OYSTER BEDS BY CULTIVATORS—CONTINUED.

CULTIVATORS.	LOCALITY.	No. Bushels Shells Planted.	No. Bushels Crushed Stone Planted.	No. Bushels Long Island Gravel Planted.	No. Bushels of Gravel and Sand Dredged and Planted.	No. Bushels of Bridgeport Natural Bed Set of 1896.	Total Number of Bushels Planted.
	Brought forward	1,895,616	42,860	18,000	5,469,725	145,923	7,571,924
Stevens, Geo. W.	Norwalk	500					500
Stevens, Wm. I.	Norwalk	83,000	21,100				104,100
Stoney Creek Oyster Co.	Branford	25,000					25,000
Stratford Oyster Co.	Stratford	45,000			217,000		262,000
Thomas, John.	New Haven	10,000					10,000
Thomas, Thomas.	New Haven	12,000					12,000
Thomas & Jones.	New Haven	3,000					3,000
Thompson, J. E.	New Haven	5,000					5,000
Townsend, Brown & Rowe.	New Haven	70,000					70,000
Vroom, Joseph.	Norwalk	5,000				1,000	6,000
A. W. Von Glah.		12,000					12,000
Warren, Geo. N.	Norwalk					3,000	3,000
West. P. F.	Bridgeport	10,000					10,000
	Total	2,176,116	63,960	18,000	5,686,725	149,923	8,094,524

No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
1	Amateur.	Bridgeport.	William A. Lewis.	William A. Lewis.
2	S. E. Smith	Bridgeport.	Harriet J. Nash.	Charles I. Nash.
3	Valiant.	Bridgeport.	Pher. F. West.	Pher. F. West.
4	Simon Banks	Bridgeport.	Edgar Osborne.	William H. Austin.
5	A. F. Beard	New York	Daniel Sprague.	Daniel Sprague.
6	Libbie N.	Bridgeport.	Joseph Ehler.	Joseph Ehler.
7	Recreation.	New Haven.	Walter N. Avery.	W. N. Avery.
8	Echo.	Norwalk.	George D. Clark.	George D. Clark.
9	Mary.	Bridgeport.	Lawrence Layden.	L. Layden.
10	Irene.	Norwalk.	Frank L. Mills.	F. L. Mills.
11	Broadbill	Norwalk	Charles L. Lewis.	C. L. Lewis.
12	Anna.	Rowayton	John Mott.	John Mott.
13	Althea.	Bridgeport.	Charles G. Fanning.	George Rowland.
14	Yellow Jack	South Norwalk.	S. J. Byxbee.	S. J. Byxbee.
15	Flossie T.	Bridgeport.	Arthur A. Bond.	A. A. Bond.
16	Parole.	Bridgeport.	Samuel H. Danks	Thomas Hoyt.
17	Rescue.	Bridgeport.	John Cihak.	John Cihak.
18	Viking.	Rowayton.	Oliver Cook.	Oliver Cook.
19	Redfern.	South Norwalk.	William M. Redfern.	Wm. M. Redfern.
20	Alice.	Rowayton.	Robert M. Utz	R. M. Utz.
21	Viola May	Bridgeport.	Wheeler Hawley estate.	Edwin W. Hawley.
22	Harry.	Stratford.	Housatonic Oyster Company.	Michael O'Connor.
23	Azellia.	South Norwalk.	Francis E. Mervin.	F. E. Mervin.
24	Mary Lavina.	Stamford.	John McGuinness.	John McGuinness.
25	Shelldrake.	Bridgeport	Edward L. Palmer.	Edward L. Palmer.
26	Lettie.	Norwalk.	Martin W. Knowlton.	M. W. Knowlton.
27	Elmie.	Stratford.	George J. Jack.	George J. Jack.

## LIST OF VESSELS LICENSED TO WORK UPON THE CONNECTICUT NATURAL OYSTER BEDS.—CONTINUED.

No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
28	Gomp.....	Bridgeport.....	H. B. Gompert.....	H. B. Gompert.....
29	Rambler.....	Norwalk.....	Henry P. Morgan.....	Charles N. Raymond.
30	Emma.....	Bridgeport.....	Joseph Freyler.....	Fred Moser.....
31	Edna.....	South Norwalk.....	Joshua R. Jennings.....	J. R. Jennings.....
32	Elsie M.....	Rowayton.....	William G. Moe.....	William G. Moe.....
33	Lillian.....	Rowayton.....	Julia L. Crockett.....	Alfred S. Crockett..
34	Ida May.....	Rowayton.....	George A. Wicks.....	George A. Wicks....
35	Martha.....	Rowayton.....	Hans Gager.....	Hans Gager.....
36	Jessie E.....	Patchogue.....	J. F. Paxlow.....	William P. Paxlow..
37	Arrow.....	South Norwalk.....	Charles H. Gehrman.....	Chas. H. Gehrman..
38	Cora.....	South Norwalk.....	Charles W. Remson.....	Charles W. Remsen.
39	James A. Hoyt.....	South Norwalk.....	James W. Hoyt.....	George A. Hoyt....
41	J. P. Z.....	South Norwalk.....	J. P. Zeliffe.....	J. P. Zeliffe.....
42	Goldbug.....	Milford.....	M. L. Botsford.....	M. L. Botsford.....
43	A. E. Johnson.....	South Norwalk.....	A. E. Johnson.....	W. H. Raymond....
44	Economy.....	South Norwalk.....	J. Ellsworth.....	William H. Clark...
45	Gracie.....	Rowayton.....	John H. Plander.....	J. H. Plander.....
46	Maggie Holly.....	Greenwich.....	Samuel A. Minor.....	Charles H. Lyon.....
47	Ada Morton.....	Greenwich.....	George W. Ferris.....	George W. Ferris...
48	Sadie E.....	Greenwich.....	Samuel Husted.....	Samuel Husted....
49	Claudia M.....	Greenwich.....	A. Lincoln Ford.....	A. Lincoln Ford....
50	Lizzie.....	Greenwich.....	H. P. Newman.....	H. P. Newman.....
51	Sarah L. Pearsall.....	Norwalk.....	Orin Byxbee.....	Orin Byxbee.....
52	Thistle.....	Rowayton.....	Frank Hillins.....	Frank Hollins.....
53	Nathan C.....	Rowayton.....	Ellsworth E. Champlin..	Ellsworth Champlin..
54	Susie E.....	Rowayton.....	George H. Ackerly.....	George H. Ackerly..
55	Annette.....	South Norwalk.....	James A. Smith.....	James A. Smith.....

## LIST OF VESSELS LICENSED TO WORK UPON THE CONNECTICUT NATURAL OYSTER BEDS.—CONTINUED.

No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
56	Henry R.....	Rowayton.....	Henry E. Walker.....	Henry E. Walker.....
57	Francis A.....	South Norwalk.....	William Godfrey.....	William Godfrey.....
58	Wave.....	South Norwalk.....	Bazilar Egbert.....	Bazilar Egbert.....
59	R. and H.....	South Norwalk.....	Reed & Houseman.....	B. P. Reed.....
60	Whiteshell.....	Milford.....	John Hall.....	Clayton Wilcox.....
61	Mary F.....	South Norwalk.....	Samuel J. Ayres.....	Samuel J. Ayres.....
62	Annie W.....	Rowayton.....	Oscar H. Scott.....	Oscar H. Scott.....
63	Ada.....	South Norwalk.....	William H. Tobey.....	William H. Tobey.....
64	Phebe M.....	South Norwalk.....	Abraham Decker.....	Abraham Decker.....
65	Willie.....	South Norwalk.....	George W. Kinsey.....	George W. Kinsey.....
66	Lillie.....	Rowayton.....	John Jarvis.....	John Jarvis.....
67	Heba.....	South Norwalk.....	Edwin T. Tobey.....	Edward T. Tobey.....
68	Elsie A.....	South Norwalk.....	Charles D. Tobey.....	Charles D. Tobey.....
69	A. H. Purdy.....	South Norwalk.....	Lawson & Martineau.....	Aaron Martineau.....
70	Ida Florence.....	South Norwalk.....	William Keene.....	William R. Godfrey.....
71	Addie L.....	South Norwalk.....	Bert Ayres.....	Bert Ayres.....
72	Levinah.....	South Norwalk.....	Lawson & Martineau.....	Nelson Lawson.....
73	Ida May.....	South Norwalk.....	Stanley Lowndes.....	George B. Tallmadge.....
74	Willis B.....	Rowayton.....	William L. Ackerly.....	William L. Ackerly.....
75	Carrie O.....	Bridgeport.....	George Felix.....	G. Felix.....
77	Clarissa O.....	New Haven.....	Charles N. Eaton.....	Edward B. Eaton.....
79	Elk.....	Bridgeport.....	Charles R. and Ed. Smith.....	Charles R. Smith.....
80	Ella.....	Bridgeport.....	Christian Billing.....	C. Billing.....
81	Loretta E. Coleman.....	New Haven.....	John H. Coleman.....	John Coleman.....
82	Violet.....	Bridgeport.....	Paragust Peirron.....	Paragust Peirron.....
83	Eva B.....	South Norwalk.....	Eva B. Lyle.....	William E. Lyle.....
84	Rover.....	Glenwood, L. I.....	Samuel Thorne.....	F. R. Stevens.....



## LIST OF VESSELS LICENSED TO WORK UPON THE CONNECTICUT NATURAL OYSTER BEDS. — CONTINUED.

No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
85	Sadie.....	Norwalk.....	William Ross.....	William Ross.....
86	Witch End.....	Bridgeport.....	Daniel Sprague.....	Charles Mills.....
87	Hattie A. Wallace...	New Haven.....	Carrington & McNeil.....	John P. McNeil.....
88	Minnie A.....	Greenwich.....	John W. Burroughs.....	John W. Burroughs.....
89	Jennie B.....	East Norwalk.....	Oakey Smith.....	Oakey Smith.....
90	Empress.....	Stamford.....	John Decker & Son.....	John Decker, Jr.....
91	Ann Gertrude.....	Greenwich.....	B. F. Palmer.....	B. F. Palmer.....
92	Julian.....	Greenwich.....	William L. Whaley.....	William L. Whalley.....
93	Jennie Florence.....	Greenwich.....	Benjamin R. Wilmot.....	Orris S. H. Wilmot.....
95	Dora Deane.....	Greenwich.....	F. X. Stimmell.....	F. X. Stimmell.....
96	Nellie G.....	Greenwich.....	James Stubbs.....	Edward Sidney.....
97	Carrie May.....	Bridgeport.....	D. and E. Burroughs.....	Edward Burroughs.....
98	Lottie.....	Rowayton.....	F. Boerum.....	F. Boerum.....
99	May Bell.....	Greenwich.....	M. K. and A. J. Palmer.....	Milliard K. Palmer.....
100	Jennie L.....	Rowayton.....	William R. Lowndes.....	William R. Lowndes.....
101	Ella May.....	Stratford.....	George Culver.....	George Culver.....
102	Grayling.....	Bridgeport.....	George Rowland.....	George Rowland.....
103	Ariel.....	Bridgeport.....	Fred. M. Rowland.....	Fred. M. Rowland.....
104	Ellen B.....	Bridgeport.....	Fred. M. Rowland.....	William H. Rowland.....
105	Neptune.....	Milford.....	Wallace N. Royden.....	Wallace N. Royden.....
106	Mary Amelia.....	Westport.....	Arthur and A. P. Sherwood.....	A. P. Sherwood.....
107	Hector.....	Bridgeport.....	David M. Allen.....	D. M. Allen.....
108	Harry and Fred.....	Rowayton.....	H. S. Young.....	William W. Young.....
109	Alida.....	Bridgeport.....	Ole Ariansen.....	O. Ariansen.....
110	Jessie.....	Sound Beach.....	B. F. Palmer.....	John J. Moore.....
112	George D. Allen.....	New Haven.....	John Thomas.....	John Thomas.....
113	Belle Breckenridge..	New Haven.....	W. M. Rowland & Co.....	John Page.....



NO.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
114	Libbie H.....	South Norwalk.....	Andrew Heath.....	Andrew Heath.....
115	Leo.....	Rowayton.....	Daniel P. Wicks.....	D. P. Wicks.....
116	Jennie and Alice....	Stratford.....	Henry C. Fordham....	H. C. Fordam.....
117	Clara A. Palmer.....	Greenwich.....	Charles E. Palmer.....	Clarence E. Palmer..
118	Teal.....	Bridgeport.....	Frederick and E. Sturdevant..	Fred. E. Sturdevant..
119	Edwin Forrest.....	Rowayton.....	Benjamin F. Stevens....	B. F. Stevens.....
120	Fannie S.....	Greenwich.....	Samuel Starkins.....	Samuel Starkins.....
121	Curlew.....	Wilson's Point.....	Oscar F. and Oliver S. Mills...	Oscar S. Mills.....
122	Fannie.....	South Norwalk.....	Garret F. Decker.....	G. F. Decker.....
123	John H.....	South Norwalk.....	Garret F. Decker.....	G. F. Decker.....
124	Mabelle.....	Rowayton.....	Henry L. Case.....	H. L. Case.....
125	Caution.....	South Norwalk.....	F. T. Lyon.....	F. T. Lyon.....
126	Isabelle.....	Centerport, L. I.....	William H. Weed.....	Henry H. Betts.....
127	Alice.....	Greenwich.....	Westcott & Horton.....	Charles Wescott.....
128	Wave.....	Greenwich.....	Enoch Y. Marshall.....	E. Y. Marshall.....
129	Hattie.....	Rowayton.....	O. S. Youngs.....	O. S. Youngs.....
130	Sneak.....	Rowayton.....	Stanley H. Lowndes.....	Andrew S. Mills.....
131	Benjamin Harrison..	Norwalk.....	John Broadway.....	Ralph S. Bradley....
132	Tiger.....	Norwalk.....	Grant B. Hackett.....	Grant B. Rackett....
133	Bessie.....	Milford.....	Edward N. Overton.....	F. N. Overton.....
134	Fearless.....	Bridgeport.....	Charles A. Hurd.....	Charles A. Hurd.....
135	Stanley Howard.....	New Haven.....	Charles K. Wedmore.....	Charles K. Wedmore..
136	Dictator.....	Stamford.....	Prior & Shaffer.....	A. M. Prior.....
137	E Pluribus Unum....	Stamford.....	A. M. Prior.....	A. M. Prior.....
138	Madia.....	Bridgeport.....	Walter S. Wilmot.....	Lawrence Layden....
139	Whistler.....	Bridgeport.....	Charles A. Smith.....	Charles A. Smith.....
140	Wasp.....	Bridgeport.....	George W. Eisenmann.....	Geo. W. Eisenmann..

## LIST OF VESSELS LICENSED TO WORK UPON THE CONNECTICUT NATURAL OYSTER BEDS.—CONTINUED.

No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
141	Emma L. Tracy.....	Bridgeport.....	Alfred E. Friswell.....	Alfred E. Friswell...
142	Nellie.....	Stratford.....	Stratford Oyster Company.....	William Lally.....
143	Florence T.....	Greenwich.....	John Farwell.....	James Farwell.....
144	Crystal Palace.....	New Haven.....	Edward P. Avery.....	Thomas E. Benedict.
145	Pauline.....	Bridgeport.....	John Reynolds.....	Ed. W. Hawley.....
146	Julia.....	South Norwalk.....	S. Smith L'Honnedin.....	D. P. Morrell, Jr....
147	Patrol.....	Milford.....	William M. Merwin & Son.....	Leonard Durand....
148	Julia A.....	Bridgeport.....	Boucher & Langdon.....	Frederick Langdon..
149	C. D. Wicks.....	Stratford.....	Charles D. Wicks.....	C D Wicks.....
150	Nellie J.....	South Norwalk.....	Robert Carr.....	Robert Carr.....
151	Jennie R.....	New Haven.....	J. Smith & Sons.....	John Cooper.....
152	Amy B. Cole.....	Rowayton.....	H. W. Cole.....	H. W. Cole.....
154	Hattie R.....	South Norwalk.....	George H. Shaffer.....	John B. Rider.....
155	Mayflower.....	South Norwalk.....	Charles Day.....	Frank Day.....
157	Mabel.....	New Haven.....	F. and W. Keister.....	Willie Keister.....
158	Samuel C. Bond.....	Bridgeport.....	Ashabel A. Bond.....	A. A. Bond.....
159	Waterwitch.....	Rowayton.....	L. H. Waterbury.....	L. H. Waterbury....
161	Blue Rock.....	Bridgeport.....	Charles Jack.....	W. H. Austin.....
162	Clarice.....	Bridgeport.....	James Weldon.....	J. Weldon.....
165	Gladys.....	Milford.....	Willard H. Sweet.....	W. H. Sweet.....
166	Annie.....	New Haven.....	Samuel J. Harrison.....	Samuel J. Harrison..
167	Antelope.....	Bridgeport.....	Charles G. Fanning.....	Frank Barlow.....
168	Bertha.....	Rowayton.....	Frank Grant.....	W. H. Grant.....
169	Eva C.....	Sound Beach.....	Andrew J. Palmer.....	A. J. Palmer.....
172	Alice Chase.....	Bridgeport.....	William H. Tinkham.....	William H. Tinkham.
173	Lulu.....	Greenwich.....	George A. Palmer.....	George A. Palmer...
174	C. C. Stokam.....	Bridgeport.....	Ryan & DeWolfe.....	Richard Ryan.....

No.	NAME OF OWNER.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
175	Adeline .....	Norwalk.....	Day & Roberts.....	George B. Roberts..
176	Smuggler.....	Bridgeport.....	Samuel Peck.....	S. Peck.....
180	Jerome May.....	Bridgeport.....	Pierre F. West.....	Daniel G. Rider....
181	Emma E.....	Bridgeport.....	Anton Eisenmann.....	Anton Eisenmann..
182	Stormy Petrel.....	Stratford.....	George Richardson.....	George W. Merrill..
183	Jennie L.....	Rowayton.....	Theron W. Lockwood.....	Theron W. Lockwood
184	Daniel B. Smith.....	Rowayton.....	Ira E. Petty.....	Ira E. Petty.....
185	Ethel R.....	Rowayton.....	J. A. and J. V. Monsell.....	Joseph V. Monsell..
186	Flight.....	Greenwich.....	Charles H. Hoyt.....	Charles H. Hoyt....
187	Lady Emma.....	Greenwich.....	Adolphus L. Ford.....	Adolphus L. Ford...
190	Jennie R.....	South Norwalk.....	R. K. and Silas Whitson.....	Richard K. Whiston.
191	Libbie M.....	Greenwich.....	Judson W. Hopkins.....	J. W. Hopkins.....
194	Bertie.....	Darien.....	John R. Hutton.....	John R. Hutton....
195	Hattie L.....	Bridgeport.....	Adolf Vautler.....	Edward Ayres.....
196	Anchor.....	South Norwalk.....	Joseph R. Raymond.....	William Avery.....
197	Surprise.....	New Haven.....	Mrs. Ellen S. Eaton.....	Edward B. Eaton...
198	Ellen F.....	Rowayton.....	C. E. Stevens.....	C. E. Stevens.....
199	Arkansas Traveler.....	Rowayton.....	Charles W. Bell.....	Charles W. Bell....
200	Belle.....	South Norwalk.....	Alvah B. Tuthill.....	A. B. Tuthill.....
201	Gene.....	Bridgeport.....	B. F. Hastings.....	B. F. Hastings.....
202	Windward.....	Bridgeport.....	George H. North.....	G. H. North.....
203	Alarm.....	South Norwalk.....	Mary G. Rider.....	John B. Rider.....
204	Jennie V.....	Sound Beach.....	Charles W. Ford.....	Charles W. Ford....
205	Ally Ray.....	Rowayton.....	Samuel Mott.....	S. Mott.....
206	Mary.....	Norwalk.....	M. J. Decker.....	M. J. Decker.....
207	Pell.....	Bridgeport.....	B. G. Beirin, Jr.....	J. F. Millbank.....
208	Helen.....			

## LIST OF VESSELS LICENSED TO WORK UPON THE CONNECTICUT NATURAL OYSTER BEDS.—CONTINUED.

No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
209	Edna.....	Bridgeport.....	Alonzo Hoadley.....	A. Hoadley.....
210	Blackbird.....	East Norwalk.....	Thomas H. Carr.....	T. H. Carr.....
211	Alida.....	Stratford.....	G. W. Mattson.....	G. W. Mattson.....
212	Martin M. Mott.....	Greenwich.....	Oscar Newman.....	Oscar Newman.....
213	Irene.....	Greenwich.....	Addison Palmer.....	Addison Palmer.....
214	Annie V.....	Black Rock.....	George F. Burr.....	G. F. Burr.....
215	Lola L.....	Bridgeport.....	G. H. Evans.....	G. H. Evans.....
216	Bradley.....	Bridgeport.....	W. A. Crowfoot.....	W. A. Crowfoot.....
217	Lucia.....	Darien.....	James M. Willmott.....	James M. Willmott.....
218	Mosetta H.....	Rowayton.....	Preston Hart.....	Preston Hart.....
219	Irene M.....	New Haven.....	E. H. Weaver.....	George T. Fox.....
221	Louisa.....	Stamford.....	Charles W. Mead.....	C. W. Mead.....
222	Pearl.....	Bridgeport.....	Henry Sturdevant.....	Henry Sturdevant.....
223	Trude.....	Stamford.....	B. M. Lockwood.....	B. M. Lockwood.....
224	Exile.....	Bridgeport.....	F. S. Crooker.....	F. S. Crooker.....
225	Belleport.....	Milford.....	William M. Merwin & Sons.....	Frank Brown.....
228	Edith R.....	Guilford.....	Gilbert L. Gates.....	G. L. Gates.....
229	Helen B. 2d.....	Bridgeport.....	Joseph P. Lynch.....	J. P. Lynch.....
230	Rachael.....	Norwalk.....	Harry Hunter.....	Harry Hunter.....
231	Hattie.....	Rowayton.....	E. M. Ambler.....	E. M. Ambler.....
233	Frank.....	Saugatuck.....	Gregory & Bradley.....	George W. Gregory.....
234	May Queen.....	East Norwalk.....	J. C. Hawkins.....	R. E. Morgan.....
236	Lucy A. Lane.....	Stamford.....	Edward B. Palmer.....	Edward B. Palmer.....
237	Jennie.....	Bridgeport.....	William E. Burnham.....	Andrew Billings.....
238	Magnolia.....	Bridgeport.....	Charles A. Bradley.....	Albert A. Bradley.....
240	Ada.....	Greenwich.....	Gilbert Hopkins.....	Gilbert Hopkins.....
242	Calista R.....	Rowayton.....	Edward H. White.....	Fay O. White.....



No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
243	Pansey.....	Fairfield.....	Frederick Marberg.....	Frederick Marberg..
244	Anna W.....	New Haven.....	Hannah Jones.....	Edward R. Christie..
246	Elsie B.....	Branford.....	Elisha H. Tryon.....	E. H. Tryon.....
247	Witch.....	New Haven.....	John Bradley.....	Thomas E. Benedict..
249	James Kirby.....	Bridgeport.....	Fred. F. Ersham.....	William T. Dennis...
254	Addie Watts.....	Bridgeport.....	Sarah A. Lockwood.....	James F. Hoyt.....
256	Nidus.....	Bridgeport.....	James Black.....	Frank Burroughs...
257	Addie R.....	Norwalk.....	Hollins & DeWaters.....	John H. DeWaters...
258	Effie May.....	New Haven.....	John Page.....	John Page.....
265	Starlight.....	Bridgeport.....	W. L. Ferris.....	Legrand Treadwell..
266	Ella.....	.....	.....	.....
268	Mary A.....	Bridgeport.....	George M. Gould.....	George M. Gould....
269	Gopher.....	Norwalk.....	Robert S. Brown.....	Robert S. Brown....
270	Juanita.....	Bridgeport.....	Charles H. Bedell.....	Charles H. Bedell...
272	Lena.....	Norwalk.....	Lena Alvin.....	Walter Thompson...
273	Lorena B.....	Norwalk.....	George W. Byxbee.....	George W. Byxbee...
276	Victor.....	East Norwalk.....	Henry L. War.....	H. L. War.....
280	Nellie C.....	Greenwich.....	Harry Newman.....	Harry Newman.....
583	Sword Fish.....	South Norwalk.....	Albert A. Geib.....	A. A. Geib.....
284	Ionia R.....	South Norwalk.....	Charles L. Raymond.....	C. L. Raymond.....
285	DeWitt.....	South Norwalk.....	William Wallgrain.....	William O. Smith....
286	Resolute.....	Westport.....	William E. Mills.....	William F. Mills....
287	Emma.....	South Norwalk.....	John J. Miller.....	J. J. Miller.....
288	Report.....	Guilford.....	Charles M. Bowen.....	C. M. Bowen.....
289	Marguerite.....	Stratford.....	Mary O. Garry.....	Marcus C. Garry....
290	Alice G.....	East Norwalk.....	John W. Allen.....	William A. Raymond..
291	Whale.....	Bridgeport.....	Daniel Sprague.....	Daniel Sprague.....

## LIST OF VESSELS LICENSED TO WORK UPON THE CONNECTICUT NATURAL OYSTER BEDS.—CONTINUED.

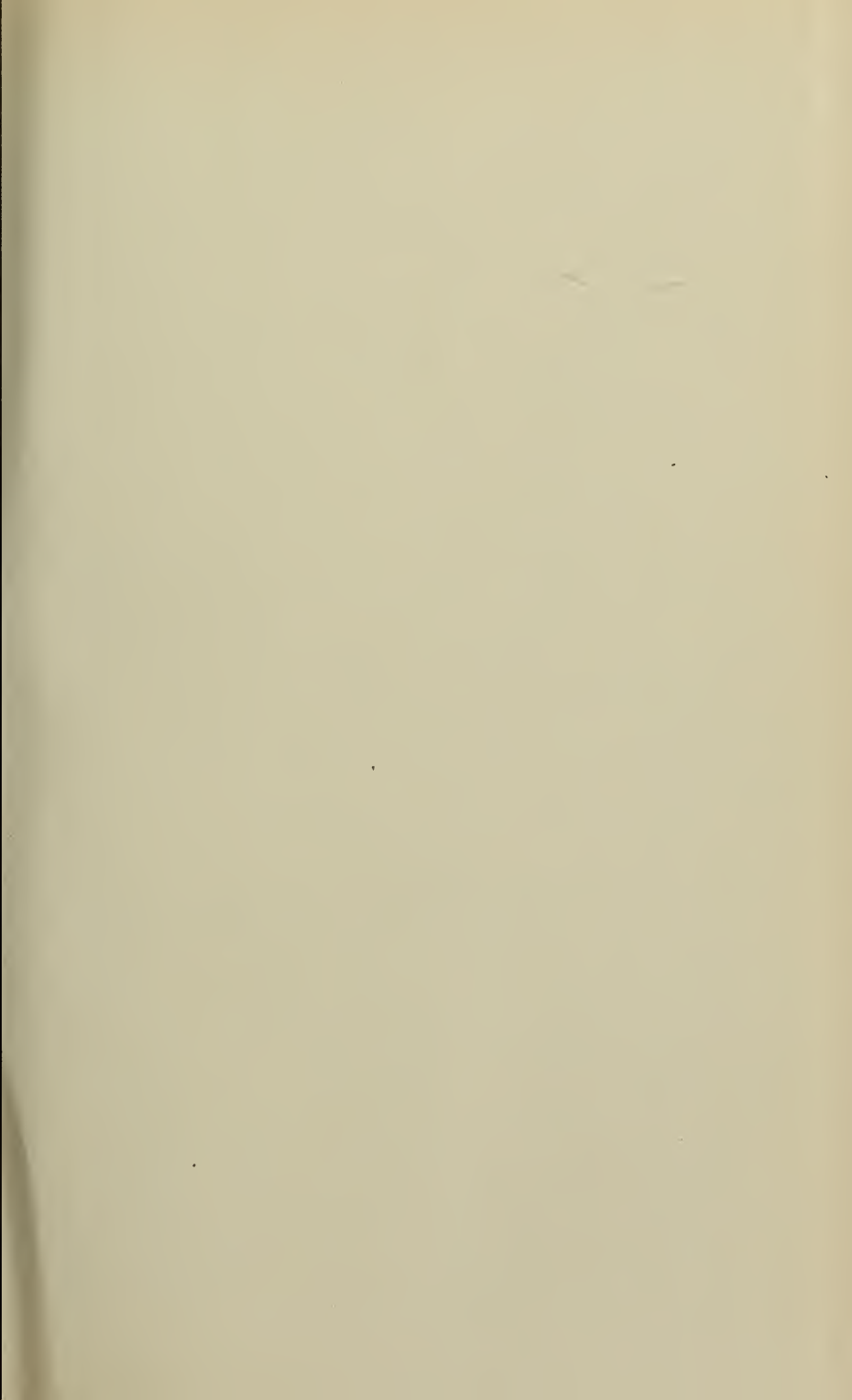
No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
292	Beatrice.....	South Norwalk.....	Ralph S. Bradley.....	R. S. Bradley.....
293	Hattie Lulu.....	South Norwalk.....	James T. Byxbee.....	J. T. Byxbee.....
294	Carrie V.....	New Haven.....	John E. Thompson.....	Edward Knight.....
295	Cleopatra.....	Milford.....	Nathan E. Wilcox.....	N. E. Wilcox.....
296	Sadie.....	Westport.....	J. W. Calvert.....	J. W. Calvert.....
297	Lyon.....	Chatham.....	Gilbert Palmer.....	G. Palmer.....
298	Bertha.....	South Norwalk.....	Ed. Schroeder.....	Clarence Webb.....
299	Thomas Armstrong..	Milford.....	E. L. Ford.....	E. L. Ford.....
300	Westchester.....	Norwalk.....	Peter Curren.....	Henry B. Lott.....
301	Freddie.....	South Norwalk.....	Clarence Ayres.....	C. Ayres.....
302	Adelaide.....	South Norwalk.....	Theodore S. Mayhew.....	T. S. Mayhew.....
303	Colorado.....	Greenport, L. I.....	W. M. Merwin & Son.....	George B. Lindsley..
304	Wave.....	Stamford.....	Thomas Cumming.....	E. C. Naton.....
305	F. E. Webster.....	Greenwich.....	Samuel Chard.....	W. H. Worden.....
306	Susie C.....	Greenwich.....	Samuel Chard.....	Stanley G. Chard....
307	Piano.....	Greenwich.....	Samuel Chard.....	John A. Chard.....
308	Emma Jane.....	Greenwich.....	Samuel Chard.....	William B. Chard....
309	E. S. Mari'ida.....	Greenwich.....	G. W. Marshall.....	G. W. Marshall.....
310	Priscilla.....	Greenwich.....	Clinton F. Hopkins.....	C. F. Hopkins.....
311	Betta.....	New Haven.....	Albert W. Eaton.....	A. W. Eaton.....
312	Savoy.....	Bridgeport.....	J. E. Mills.....	A. J. Hart.....
313	Chrysanthemum.....	Bridgeport.....	Artemisia V. Hoyt.....	Clifford B. Hoyt....
314	Elsie.....	Fairfield.....	Frederick Marberg.....	F. Marberg.....
315	.....	South Norwalk.....	Minot S. Smith.....	Garrett P. Corson...
316	A. & E.....	South Norwalk.....	N. P. Nelson.....	A. B. Craw.....
317	The Lizzie.....	South Norwalk.....	Frank Mayhew.....	F. Mayhew.....
318	Bertha.....	South Norwalk.....	William H. Gehrmann.....	Wm. H. Gehrmann...

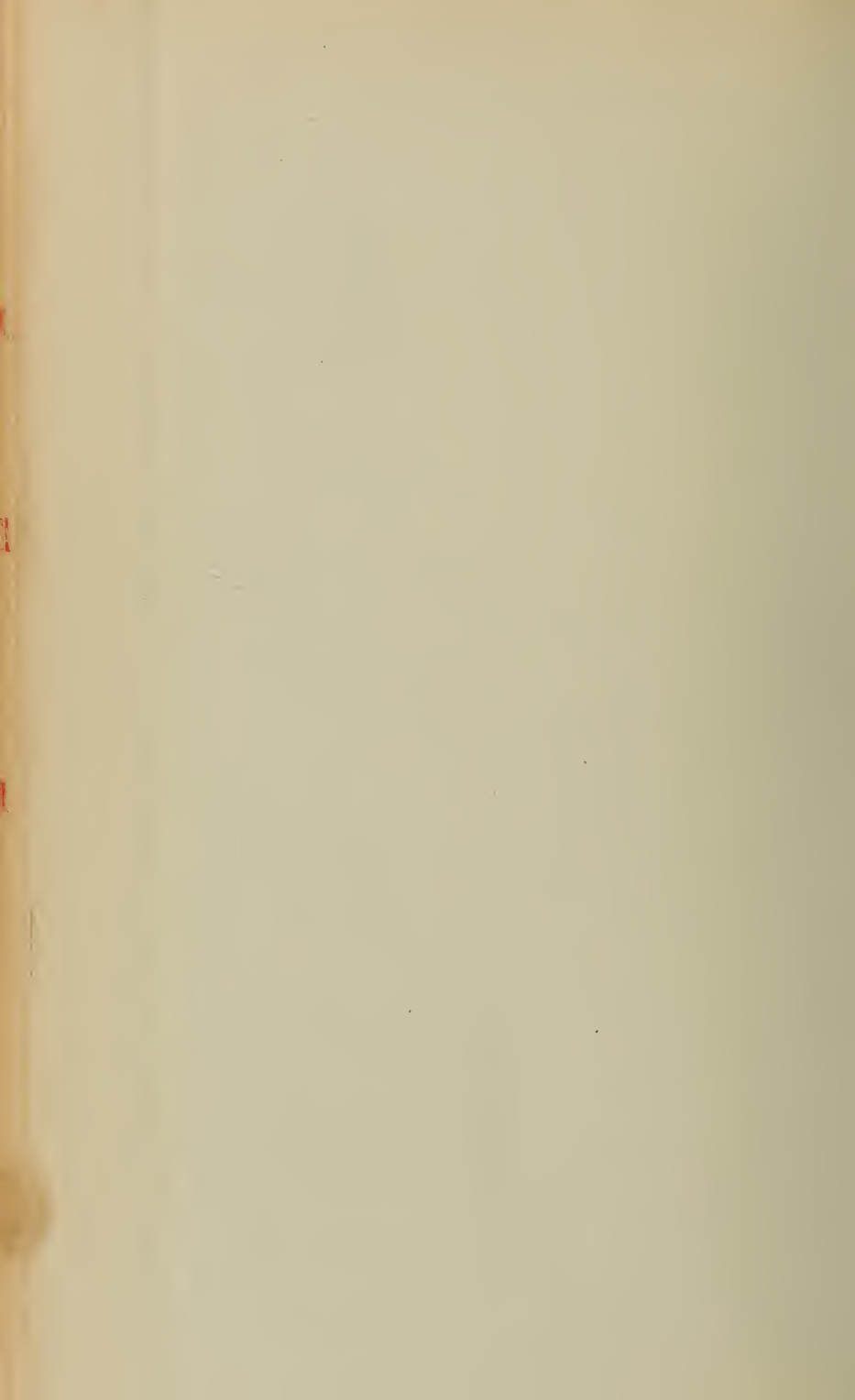


No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
319	Josie V.....	South Norwalk.....	Montraville B. Soper.....	M. B. Soper.....
320	Annie H.....	Darien.....	Stephen H. Miner.....	S. H. Miner.....
321	Howard.....	Rowayton.....	Aaron G. Stevens.....	A. G. Stevens.....
322	Mary Underhill.....	Stratford.....	Charles Jack.....	Walter Thompson.....
323	Vandean Chief.....	Northport.....	Joseph Scudder.....	John H. Lowndes.....
324	Three Sisters.....	Stratford.....	Nelson J. Wakelee.....	N. J. Wakelee.....
325	Laura.....	Bridgeport.....	Walter R. Edwards.....	W. R. Edwards.....
326	Florence B.....	New Haven.....	F. J. Bohner.....	Daniel Dowd.....
327	Waghenicut.....	Stratford.....	C. W. Blakeslee.....	C. W. Blakeslee.....
328	Little Jane.....	Stratford.....	Daniel Talmage.....	D. Talmage.....
329	Wicked Sal.....	New Haven.....	Dennis L. Dowd.....	D. L. Dowd.....
330	Clara.....	Bridgeport.....	James F. McShane.....	J. F. McShane.....
331	Sara Beesley.....	Southport.....	E. B. Mills & Co.....	M. L. Mills.....
332	Crescent.....	Bridgeport.....	Arthur S. Molloy.....	Lewis P. Skidmore.....
333	Herold.....	New Haven.....	John McNeil.....	J. McNeil.....
334	C. L. Risley.....	Black Rock.....	William Risley.....	Charles J. Nash.....
335	Leslie.....	Rowayton.....	John H. Crockett.....	J. H. Crockett.....
336	None Such.....	Rowayton.....	Clarence F. Mills.....	C. F. Mills.....
337	Jennie W.....	Darien.....	William Wood, Jr.....	Wm. Wood, Jr.....
338	Mamie.....	Bridgeport.....	Henry Murphey.....	R. E. Wells.....
339	Jeannette.....	Bridgeport.....	William R. Seaman.....	Wm. R. Seaman.....
340	Sensation.....	Hartford.....	Henry Myers.....	Henry Myers.....
341	Nellie.....	Smithtown, L. I.....	Frank D. Hawkins.....	C. W. Blydenburgh.....
342	Louisa J. Evans.....	Rowayton.....	William Stevens.....	Sidney B. Wilsey.....
343	Mystic.....	Greenwich.....	H. J. Collinge.....	Wm. J. Craig.....
344	Margarita.....	Bridgeport.....	Charles L. Gompertz.....	Charles L. Gompertz.....
345	Sea Gull.....	Bridgeport.....	Foster Tanner.....	Foster Tanner.....

## LIST OF VESSELS LICENSED TO WORK UPON THE CONNECTICUT NATURAL OYSTER BEDS.—CONTINUED.

No.	NAME OF VESSEL.	HAILING PLACE.	NAME OF OWNER.	CAPTAIN.
346	Wild Duck.....	Rowayton.....	Frank R. Stevens.....	F. R. Stevens.....
347	Emma R. Martin...	New York City....	G. H., W. J. & C. N. Martin...	Chester N. Martin...
348	Bessie.....	Bridgeport. . . . .	Peter J. Condon.....	P. J. Condon.....
349	Kelpie.....	Rowayton.....	Robert B. Dibble.....	R. B. Dibble.....
350	Gypsy.....	Milford.....	..... Frishie.....	Arthur W. Halsey...





George C. Waldo. }  
Christian Swartz. } COMMISSIONERS.  
George W. Hallock. }

*Note:*  
Figures inside the Natural Bed lines are buoy numbers.

**CONNECTICUT SHELL FISH COMMISSION.**  
 George C. Waldo.  
 Christian Swartz.  
 George W. Hallock. } COMMISSIONERS.

SCALE  $\frac{1}{20000}$ .  
 1896.

Note:  
 Figures inside the Natural Bed lines are buoy numbers.

Prepared by  
 David C. Sanford, C.E.

Long Neck Point.  
 State Jurisdiction Line.  
 Colyer's Pt.  
 Henry Hilton.  
 Fish Island.  
 Fish Island & Roton Point Natural Bed.  
 307 Acres.  
 Roton Point.  
 Bell Island.  
 Smith's Island.  
 Norwalk Light.

Parcels and Owners:  
 Taylor, Eaton, Henry Hilton, Fish Island, Taylor, A. Stevens, G.W. Stevens, Dibble & DeWaters, Tutthill, C. & L. H., Craw & L'Hommedieu, Reef, H.B. Taylor, J.L. L'Hommedieu, W.I. Stevens, G. Williamson, S.H. Lowndes, H.R. Hilton, S.H. Lowndes & A. Dibble, N.W. Moore, S. Byrbee, H. Bell, C.W. Hoyt, J.L. Crockett, Geo. M. Davis, W.I. Stevens, J. & J. W. Elsworth, H.B. Morgan, Craw & L'Hommedieu, J. Decker, A.B. Tutthill, S.B. Byrbee, C. & L. H., Burbank, Wicks & Bassett, Moore, D.P. Wicks, A.S. Crockett, J.H. Crockett, C.W. Bell, Craw & L'Hommedieu, Hart & Raymond, T.W. Lockwood, W.G. Moe, J.H. Lowndes, S.B. Dibble, A. Stevens, J. Decker, S.B. Byrbee, C. & L. H., Burbank, Wicks & Bassett, Moore, D.P. Wicks, A.S. Crockett, J.H. Crockett, C.W. Bell, Craw & L'Hommedieu.

State Jurisdiction Line.  
 Five Mile River.  
 Pike.  
 Darien.  
 Norwalk.

Standard Association Bridgeport, Conn.



# CONNECTICUT SHELL FISH COMMISSION.

George C. Waldo.

Christian Swartz.

George W. Hallock.

COMMISSIONERS.

SCALE  $\frac{1}{20000}$ .

1896.

Note:

Figures inside the Natural Bed lines are buoy numbers.

Long Neck Point.

State Jurisdiction

Craw & L'Hommedieu.  
Line.

Hart & Raymond.

J.H. Lowndes.

T.W. Lockwood.

W.G. Moe.

Reef.

Tutthill.

C.B. & L.H.

H.B. Taylor.

Craw & L'Hommedieu.

J.L.  
L'Hommedieu.

H.R. Hilton.

Craw & L'Hommedieu.

Tutthill.

Taylor.

Dibble &  
DeWaters.

G.W.  
Stevens.

W.I. Stevens.

1234

1191

2475

S.H. Lowndes  
&  
A. Dibble.

N.W. Moore.

S. Byrbee.

H. Bell.

C.W. Hoyt.

J.L. Crockett.

S.H. Lowndes.

S.B. Dibble.

A. Stevens.

W.I. Stevens.

Geo. N. Davis.

Colyer's Pt.

Henry Hilton.

Fish Island.

Fish Island

& Rote  
307 Acres

State

Jurisdiction

Pike.

Darien

1892

1887

1892

2474

2473

1901

2455

1900



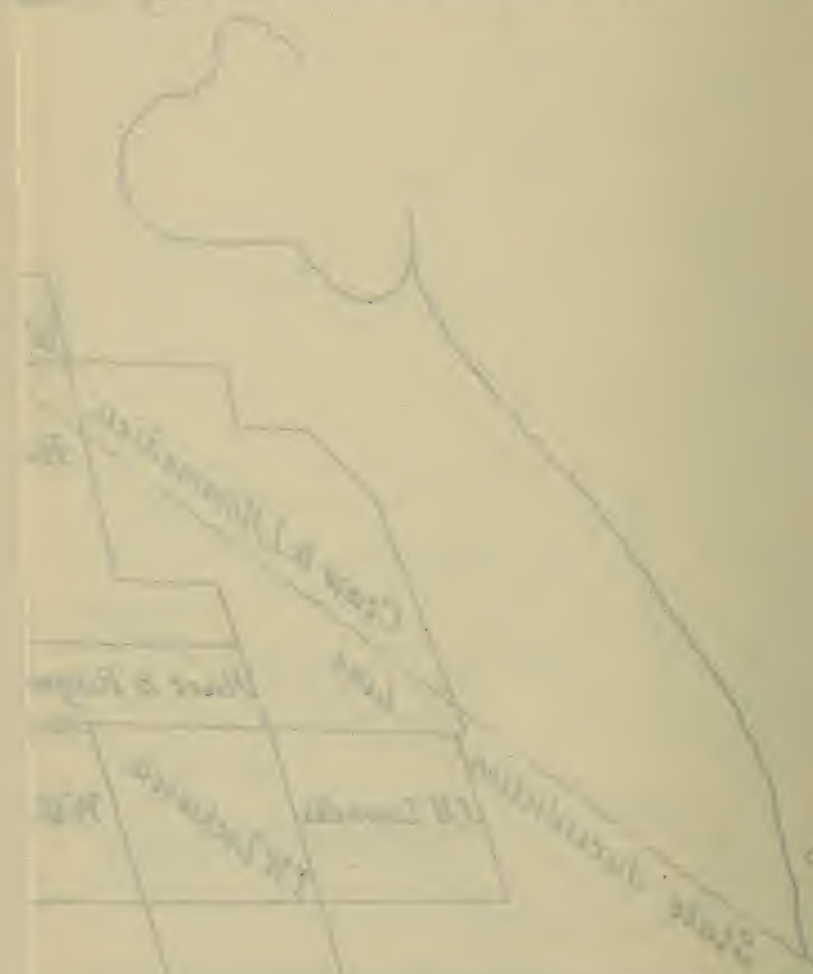


# CONNECTICUT SHELL FISH COMMISSION

Commissioners  
 J. C. Walling  
 J. C. Walling  
 J. C. Walling

June 1898  
 1898

For the purpose of the Commission, the following is the list of the fish which are taken in the State of Connecticut.



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APPENDIX.

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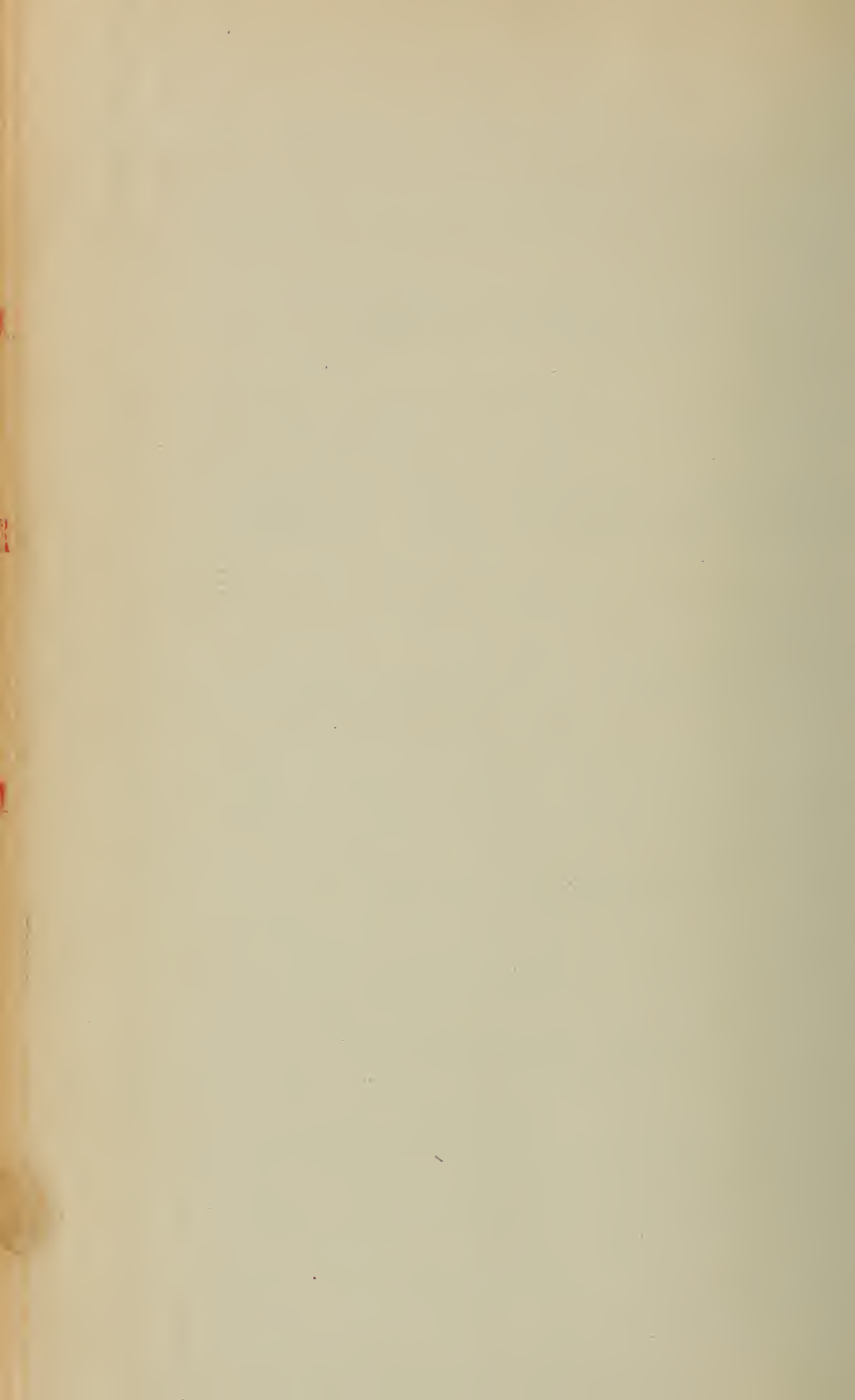
COMPILATION OF LAWS  
OF THE  
STATE OF CONNECTICUT,  
RELATING TO OYSTER GROUNDS IN EX-  
CLUSIVE JURISDICTION OF THE STATE.

Compiled by the Clerk of  
SHELL FISHERIES

A. McC. MATHEWSON.

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# SHELL FISH COMMISSION.

NOTE.—All Sections refer to General Statutes 1888.

SECTION 2310. The Fish Commissioners shall be and constitute a Board of Commissioners of Shell-fisheries.

## PUBLIC ACTS, 1895.

### CHAPTER CCXLVII.

SECTION 1. Chapter LXXXI and Chapter CXI of the Public Acts passed at the present session of the General Assembly are hereby amended by striking out the words "Board of Commissioners of Shell-Fisheries," wherever said words occur in said Chapters, and inserting in lieu thereof the words Shell Fish Commissioners.

## PUBLIC ACTS, 1889.

### CHAPTER CC.

SECTION 1. From and after the first day of July, 1889, the powers and duties vested by law in the fish commissioners, as a board of commissioners of shell-fisheries, shall be vested in three shell-fish commissioners, who shall be appointed by the governor and confirmed by the senate; two of said commissioners shall hold office until July 1, 1891, and one of said commissioners shall hold office until July 1, 1893. The term of office of such commissioners shall thereafter be four years; *provided*, that nothing contained in this act shall be so construed as to interfere with the terms of office of the present commissioners during the period for which they have been already appointed under the provisions of existing law.

SEC. 2. In all cases hereafter brought before said commissioners, under the provisions of sections 2329, 2330, and 2331 of the general statutes, the parties in interest shall pay each of said commissioners for such services the sum of five dollars per day and expenses for every day employed by them in such hearing, and said commissioners shall pay all sums received by them for such services to the state treasurer.

SEC. 3. The Governor shall appoint a clerk, who shall be confirmed by the senate; he shall be designated as clerk of shell-fisheries, and shall hold office for two years from the first day of July succeeding his appointment; he shall perform all of the clerical duties of the commission, and make an assessment on all oyster grounds for taxation; he shall receive, as compensation for his services, fourteen hundred dollars per annum, in monthly installments.

SEC. 4. All the powers and duties now vested by law in the board of commissioners of shell-fisheries, except the assessment of oyster grounds for taxation, shall be hereafter performed by said shell-fish commissioners. They may also confer with the officials of the United States government with reference to plans for the destruction of star-fish. They shall maintain an office in the city of New Haven, and incur necessary incidental expenses not exceeding the amount of four hundred dollars per year.

SEC. 5. Said shell-fish commissioners shall be a board of relief, and shall meet at such times and places as they shall fix, and may adjourn from time to time till they shall have completed their duties. As such board of relief, said commissioners shall have and and exercise all the powers and duties now conferred by law upon boards of relief of towns.

SEC. 6. Said shell-fish commissioners shall be paid the sum of five dollars per day and expenses for services rendered under the provisions of this act, but the amount paid for services, together with the expenses of said commissioners, shall not exceed the sum of fifteen hundred dollars in any one year.

SEC. 7. If such commissioners shall at any time require the services of an engineer, they may employ such engineer; *provided*, that if such engineering work is for the determination of boundaries of oyster grounds of any person or persons, such person or persons shall pay for the same, and in all grants of grounds hereafter made, the buyer of such grounds shall pay all engineering expenses pertaining thereto, and that for any other engineer work the state shall not pay exceeding the sum of two hundred dollars in any one year; but any work upon the maps on engineering records connected with the commission shall be performed by an engineer designated by and under the direction of the commissioners.

SEC. 8. No ground hereafter designated for the cultivation of oysters, in the waters of Long Island Sound, within the jurisdiction



of said commissioners, shall be surrendered to the state, unless such release is made without charge or expense to the state, and is approved by said commissioners.

SEC. 9. All acts and parts of acts inconsistent herewith are hereby repealed.

## PUBLIC ACTS, 1895.

### CHAPTER CCXCI.

SECTION 1. Section one of Chapter CC of the Public Acts of 1889 is hereby amended by inserting in the eighth line thereof after the word "years," the words "or until their successors are appointed and qualified; and any vacancy occurring in said Board for any cause may be filled by the Governor for the unexpired term."

## PUBLIC ACTS, 1895.

### CHAPTER CCXCI.

SECTION 2. Section three of Chapter CC of the Public Acts of 1889 is hereby repealed and the following inserted in its place: The Shell-Fish Commissioners shall appoint a clerk, who shall be designated as Clerk of Shell-Fisheries, and shall hold office during the pleasure of said Commissioners; he shall receive, as compensation for his services, fourteen hundred dollars per annum in monthly installments. Said Commissioners shall make an assessment on all oyster grounds for taxation.

SEC. 2315. The State shall exercise exclusive jurisdiction and control over all shell-fisheries which are located in that area of the State which is within that part of Long Island Sound and its tributaries bounded westerly and southerly by the State of New York, easterly by the State of Rhode Island, and northerly by the following lines, to wit: commencing at Byram Point, the westernmost limit of the State at high-water mark, at a rock covered by the outermost clump of cedars; running thence in a straight line one and eight-tenths miles across the bays and inlets to a big white rock at the extremity of a point designated as Horse Neck Point on the U. S. Coast Survey map, and otherwise known as Field Point; thence from said white rock at Field Point, in a straight line in an easterly direction two and three-tenths miles across the waters of the bay and inlets, to a large boulder on a point designated on the U. S. Coast Survey map as Greenwich Point, otherwise known as Flat Neck Point; which boulder is situated southerly of the woods

on said Flat Neck Point; thence from said last-named point, following the coast line at high-water mark seven-tenths of a mile to the extreme southeast point of said Greenwich Point; thence across the bays and inlets two and four tenths miles to the most southern extremity of Shippan Point at high-water mark; thence along Shippan Point at high-water mark four-tenths of a mile to the southeastern extremity of said point; thence two and six-tenths miles to the southern extremity of Long Neck Point, at high-water mark; thence one and four-tenths mile to Colyer's Point, which is a point northerly of Fish Island; thence one and four-tenths mile to Roton Point, otherwise known as Bell Island Point: thence one-half mile to Southwest Point; thence following the outside high-water mark of Sheffield's or Smith's, Copp's, Goose, and Cockenoe's Islands six and five-tenths miles to Sherwood's Point; thence one and one-tenth mile to Farm's Point; thence two and five tenths miles to Pine Creek Point; thence one and two-tenths mile to Shoal Point; thence three and five-tenths miles to the most southern point on the seawall of Seaside Park at Bridgeport, said point being about south from the center of Myrtle and Waldemere avenues; thence three miles to the southern extremity of Point no-point; thence one and seven tenths mile along the shore at high-water mark to the southern extremity of Stratford Point, near the light-house; thence three and seven-tenths miles to the south side of Charles Islands; thence one and two-tenths mile to Welch's Point; thence one and one tenth mile to Pond Point; thence one and seven tenths mile to Merwin's Point; thence one and one-tenth mile to Oyster River Point; thence five miles to South End; thence along the coast at high-water mark one and three-tenths mile to Johnson's Point, otherwise known as Darrows Island Point; thence seven and nine-tenths miles to the center of a large oval shaped boulder lying on Hatch's Rock and about south of Mr. O. L. Robert's white barn at Sachem's Head; thence eight and four-tenths miles to Black Boy Point; thence along the shore at high-water mark three-tenths of a mile to Hammonasset Point; thence one and seven-tenths mile to Kelsey's Point; thence two and three-tenths miles to Menunketesuck Point; thence three and nine-tenths miles to a point in the town of Old Saybrook at high-water mark directly south of the beacon on Cornfield Point; thence due south in the line of the meridian one-third of a statute mile to a point; thence easterly in a straight line to the outer end of the east jetty of the Connecticut River; thence to Hatchett's Point; thence two and seven-tenths miles to Black Point; thence along the coast at

high water mark three-tenths of a mile to the southeast extremity of Black Point; thence two and four-tenths miles to Millstone Point; thence one and one-tenth mile to Magonk Point; thence along the coast at high-water mark one and seven-tenths mile to Goshen Point; thence two and eight-tenths miles to Avery's Point; thence one and seven-tenths mile to Bluff Point; thence one and one-tenth mile to Groton Long Point; thence along the coast at high-water mark three-tenths of a mile to the southeastern extremity of Groton Long Point; thence five and four-tenths miles to Stonington or Windmill Point; and thence two and four-tenths miles to Pawcatuck Point, the eastern limit of the State. And all shell-fisheries not within said area shall be within the jurisdiction and control of the towns in which they are located. If a difference shall arise between any town and the Board of Commissioners of Shell-fisheries as to the boundary line between said town and the said area, said town, by its selectmen, may bring its petition to the Superior Court for the county within which said town is situated, to determine said boundary line, and said court upon reasonable notice to the parties shall hear said petition and appoint a committee to ascertain the facts in such case and report the same to said court, and said court shall thereupon make such order as may be proper in the premises.

SEC. 2316. The Board of Commissioners of Shell-fisheries shall be empowered to make or cause to be made a survey and map of all the grounds within the said area in Long Island Sound which have been or may be designated for the planting or cultivation of shell-fish; shall ascertain the ownership thereof, and how much of the same is actually in use for said purposes; they shall also cause a survey of all the natural oyster beds in said area and shall locate and delineate the same on said map, which survey and map when completed shall not cost a sum exceeding twenty-five hundred dollars, and shall report the state and condition of said fisheries biennially to the General Assembly: and said commissioners shall be empowered to appoint and employ a clerk of and for said board, and they shall each give a bond to the State with sufficient surety for the faithful performance of their duties, and for the payment to the State Treasurer of all money that may come into their hands under this chapter, in the sum of two thousand dollars.

## ORIGINAL ACQUISITION OF OYSTER GROUNDS.

SECTION 2317. Said commissioners shall also be empowered, in the name and in behalf of the State, to grant by written instruments, for the purpose of planting and cultivating shell-fish, perpetual franchises in such undesignated grounds within said area as are not and for ten years have not been natural clam or oyster beds, whenever application in writing is made to them through their clerk by any person or persons who have resided in the State not less than one year next preceding the date of said application, or by any joint stock company or corporation organized under the laws of this State, all the stockholders of which are citizens of this State. The said application and the said grant shall be in manner and form as shall be approved by the Chief Justice of the Supreme Court of Errors, and all such grants may be assigned to any person or persons who are or have been residents of the State for not less than one year next preceding such assignment, or to any joint stock company or corporation organized under the laws of this State, all the stockholders of which are citizens of this State, by a written assignment, in manner and form approved by said Chief Justice; and said commissioners shall keep books of record and record all such grants and assignments therein, and the same shall also be recorded in the town clerk's office in the town bounded on Long Island Sound within the meridian boundary lines of which said grounds are located.

SEC. 2318. When any such application is filed with the clerk of said commissioners, he shall note on the same the date of its reception, and shall cause a written notice, stating the name and residence of the applicant, the date of filing the application, the location, area, and description of the grounds applied for, to be posted in the office of the town clerk of the town bounded on the said Long Island Sound within the meridian boundary lines of which said grounds are located, where such notice shall remain posted for twenty days. Any person or persons objecting to the granting of the grounds applied for, as aforesaid, may file a written notice with the town clerk, stating the grounds of his or their objections, upon the payment to said town clerk of the sum of twenty-five cents, and at the end of said twenty days the said town clerk shall forward all such written objections to the clerk of said commission; and in case such objec-



tions are so filed and forwarded, the said commissioners, or a majority of them, shall, upon ten days notice in writing, mailed or personally delivered to all the parties in interest, hear and pass upon such objections at the town in which such grounds are located as aforesaid, or such other place as the commissioners of shell fisheries, or a majority of them, may appoint, and if such objections are not sustained and the area of ground is not, in the opinion of the commissioners, of unreasonable extent, they may for the sum of ten cents per acre, the estimated cost of surveying and mapping of such grounds. and the further consideration of one dollar per acre, paid to the said commissioners to be by them paid over to the Treasurer of the State, grant a perpetual franchise for the planting and cultivating shell-fish in such ground or in any part of the same in the manner aforesaid, and where no such objections are made such grants may be made for the considerations hereinbefore named. At all hearings before them, said commissioners may, by themselves or their clerks, subpoena witnesses and administer oaths as in courts of law.

SEC. 2319. Said commissioners shall, previous to the delivery of any instrument conveying the right to plant or cultivate shell-fish on any of said grounds, make or cause to be made a survey of the same, and shall locate and delineate the same, or cause it to be located and delineated upon the map aforesaid, and upon receipt of said instrument of conveyance the grantee shall at once cause the grounds therein conveyed to be plainly marked out by stakes, buoys, ranges, or monuments, which stakes and bouys shall be continued by the said grantee and his legal representatives, and the right to use and occupy said grounds for said purposes shall be and remain in said grantee, and his legal representatives; provided, that if the grantee or holder of said grounds does not actually use and occupy the same for the purposes named, in good faith, within five years after the time of receiving such grant, said commissioners shall petition the Superior Court of the county having jurisdiction over the said grounds to appoint a committee to inquire and report to said court as to the use and occupancy of such grounds in good faith, and said court shall in such case appoint such committee, who after twelve day's notice to petitioners and respondents, shall hear such petition and report the facts thereon to said court, and if it shall appear that said grounds are not used and occupied in good faith for the purpose of planting or cultivating shell-fish the said court may order that said grounds revert to the State, and that all stakes

and bouys marking the same be removed, the cost in said petition to be paid at the discretion of the court.

SEC. 2361. All designations of grounds in the waters of this State for the purpose of planting or cultivating oysters, clams, or mussels shall be good and valid, although the applicant is a married woman or a minor at the time of the application.

## SURRENDER OF OYSTER GROUND.

SECTION 2320. When, after the occupancy and cultivation of any grounds designated as aforesaid by the grantee or his legal representatives, it shall appear to said commissioners that said grounds are not suited for the planting or cultivation of oysters, said grantee, upon receiving a certificate to that effect from said commissioners, may surrender the same or any part thereof, not less than one hundred acres, to the State, by an instrument of release of all his right and title thereto, and shall on delivery of such instrument to the said commissioners receive their certificate of said release of said grounds, the location and number of acres described therein, which shall be filed with the State Treasurer, who shall pay to the holder the sum of one dollar for every acre of ground described in said release, where said sum has been paid therefor to the State. And the said release shall be recorded by said commissioners in their record books, and in the town clerk's office in the town adjacent to and within the meridian boundary lines of which said grounds are located. For all purposes relating to judicial proceedings in criminal matters the jurisdiction of justices of the peace of the several towns bordering on Long Island Sound shall extend southerly by lines running due south by true meridian from the southern termini of the boundary lines between said towns to the boundary lines between the States of Connecticut and New York.

PUBLIC ACTS, 1889.

### CHAPTER LXVII.

SECTION 2320, of the General Statutes, is hereby amended by inserting between the word "grantee," in the fourth line thereof, and the word "upon," in the fifth line thereof, the words "his heirs or assigns," so that the first six lines of said section, as amended, shall read as follows:



When after the occupancy and cultivation of any grounds designated as aforesaid by the grantee, or his legal representatives, it shall appear to said commissioners that said grounds are not suited for the planting or cultivation of oysters, said grantee, his heirs or assigns, upon receiving a certificate to that effect from said commissioners, may surrender the same or any part thereof, not less than one hundred acres.

SEC. 2321. Any owner of grounds heretofore designated for the cultivation of oysters in the waters of Long Island Sound within the jurisdiction of said commissioners, may surrender the same by delivery to the State of a good and sufficient deed of release of the same, duly executed and acknowledged by such owner; provided, such release is made without charge or expense to the State and is approved by said commissioners.

SEC. 2322. All surrenders to the State of oyster grounds found unsuitable for cultivation, made in pursuance of the provisions of section 2320, shall be made within eight years after the granting of such grounds if such grounds were granted prior to the first day of July, 1884, and within five years after the granting of such grounds where the grant has been made since that date; and no certificate shall be given by said commissioners, in pursuance of the provisions of said section, after the expiration of said eight or five years, as the case may be.

SEC. 2323. Said commissioners shall provide, in addition to the general map of said grounds, sectional maps, comprising all grounds located within the meridian boundary lines of the several towns on the shores of the State, which maps shall be lodged in the town clerk's office of the said respective towns, and said commissioners shall also provide and lodge with said town clerks blank applications for such grounds and record books for recording conveyances of the same, and all conveyances of such grounds and assignments, reversion, and releases of the same shall be recorded in the books of said commissioners, and in the town clerk's offices of the towns adjacent to and within the meridian boundary lines of which said grounds are located, in such books as are provided by said commissioners, subject to legal fees for such recording, and the cost of all such maps, blank books, surveys, and all other expenses necessary for the carrying out the provisions of this chapter shall be audited by the Comptroller and paid for by the Treasurer of the State, and said commissioners shall each receive for their services five dollars per day, for the time they are actually employed, as provided for in this

chapter; their accounts for such service to be audited by the Comptroller and paid by the Treasurer.

SEC. 2324. When it shall be shown to the satisfaction of said commissioners that any natural oyster or clam bed has been designated by them to any person or persons, said commissioners shall petition the Superior Court of the county having jurisdiction over said grounds to appoint a committee to inquire and report to the said court the facts as to such grounds, and said court shall in such case appoint such committee, who after twelve days' notice to the petitioners and respondents shall hear such petition, and report the facts thereon to said court; and if it shall appear that any natural oyster or clam beds, or any part thereof, have been so designated, the said court may order that said grounds may revert to the State, after a reasonable time for the claimant of the same to remove any shell-fish he may have planted or cultivated thereon in good faith, and said court may further order that all stakes and bouys marking the same be removed, the cost in said petition to be taxed at the discretion of the court.

SEC. 2325. Any commissioner who shall knowingly grant to any person or persons a franchise as hereinbefore provided in any natural oyster or clam bed, shall be fined not less than one hundred nor more than five hundred dollars, and if such franchise is granted the grant shall be void, and all moneys paid thereon shall be forfeited to the State; and the said commissioners shall in no case grant to any person or persons a right to plant or cultivate shell-fish which shall interfere with any established right of fishing, and if any such grant is made the same shall be void.

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## REVERSION OF OYSTER GROUNDS.

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PUBLIC ACTS, 1893.

### CHAPTER CL.

SECTION 1. When the taxes on any oyster grounds, within the exclusive jurisdiction of the State and under the control of the Shell-Fish Commissioners, shall be in arrears for five consecutive years, it shall be the duty of the Clerk of Shell-Fisheries to notify the owner or owners of said grounds, or their legal representatives,

of the fact of said arrears, and if, within three months after the date of said notification, all arrears of taxes on said grounds are not paid, said grounds shall revert to the State; and it shall be the further duty of the Clerk of Shell-Fisheries, upon the reversion of said grounds to the State, to make out a certificate of the fact of such reversion for record upon the books of the Commission, and said grounds shall thereupon be open for application, like all other unsold oyster grounds within the exclusive jurisdiction of the State.

SEC. 2340. All transfers of title to oyster grounds within State jurisdiction, which may hereafter be made, shall be recorded in the record books of the Board of Commissioners of Shell Fisheries; and it shall be the duty of the person, persons, or corporation making such transfer to cause such record to be made forthwith; or in lieu thereof, to forthwith give written notice of such transfer to the said commissioners, stating the date thereof, the name of the transferee or transferees, and the description of the grounds affected thereby; and upon the failure to make such record, or give such notice, the person, persons, or corporation making such transfer shall be deemed and treated by said commissioners, for all purposes of taxation, to be the owner or owners thereof, notwithstanding such transfer; and shall be liable for and shall pay all such taxes as may be laid on such land by said commissioners at any time before said record is made or said notice is given; and such tax shall be a lien on such grounds.

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## DISPUTES REGARDING OWNERSHIP.

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SECTION 2329. All questions and disputes touching the ownership, title, buoys, boundaries, ranges, extent, or location of any shell-fishery grounds within the exclusive jurisdiction of the State may be referred to and settled by the Board of Commissioners of Shell-Fisheries, who are hereby empowered, on petition of any person interested therein, to summons all the parties in interest, so far as such parties may be made known to them, to appear before them at a time and place in the summons named, such summons to be signed by the clerk of said commissioners, and served by him or such other person as said commissioners may direct; whereupon, at such time and place named, or any other time and place to which

the hearing may be from time to time adjourned, the party petitioner shall file a sworn statement of the facts as claimed by him, to which any interested party may respond by filing a sworn counter statement of the facts as claimed by him; and after hearing all the parties interested, with their witnesses and counsel, said commissioners shall make their decision in writing as soon as convenient thereafter, which decision shall be recorded in the books of record in their office, and the same shall be binding on all the parties in interest so summoned or appearing, unless an appeal shall be taken from such decision to the Superior Court in and for the county where the town is situated, between whose meridian lines any portion of said grounds may be, within ten days after such decision shall be filed by said commissioners with their clerk aforesaid, and unless such appeal shall be prosecuted to judgment, and said decision reversed by said Superior Court. Said appeal may be taken in the same manner as appeals in civil cases from justice courts.

SEC. 2330. Every person filing a petition, statement, or counter-statement, as provided in the preceeding section, shall, at the time of such filing, deposit ten dollars with said commissioners, who shall return to the prevailing party the sum so deposited by him, and shall retain the money so deposited by the defeated party as a forfeit to pay the expenses of the investigation, which money so retained shall be accounted for and paid to the State Treasurer for the benefit of the State. All applications, designations, papers, and maps pertaining to any allotment or designation of shell-fishery grounds within the area of the exclusive jurisdiction of the State, heretofore made by town officers, and all assignments of such grounds or parts thereof which have not been recorded in the office of the town clerk or of the Board of Commissioners of Shell-Fisheries, shall be left by the owner or owners, claimant or claimants thereof for record, and shall be recorded in the office of said commissioners, or in the office of the town clerk of the town between whose meridian lines said grounds or any part thereof are situated, and they shall so be left within three months after a copy of this section shall be posted in the town clerk's office of the town where such grounds are situated; and upon failure to leave such evidences of title within such time, for record, said commissioners may order the alleged owner or owners, claimant or claimants, to appear before them at a time and place in such order named, and show cause why said ground should not be deemed and treated as the property of the State; and if such parties or any of them fail to appear as ordered,



or, on appearing, shall refuse to produce any evidences of title which they may have or claim to have, or shall refuse to permit the same to be recorded, or if they shall fail to produce any evidence of title, or shall fail to show any reason for such failure to produce the same, the grounds shall be treated, as against such alleged owner or owners, claimant or claimants, as undesignated grounds belonging to the State, and said commissioners may thereupon designate the same or any part thereof as provided by statute.

SEC. 2332. When any designation of shell-fish grounds which are wholly or partially within the exclusive jurisdiction of the State, contains therein a map thereof or refers therein to such map lodged on file in the town clerk's office, and the owner or owners of the adjoining grounds, so far as they lie within the exclusive jurisdiction of the State, do not agree as to the location of the line fixed by such map, or if the boundary between such owners is a town boundary and they disagree as to the same, one or more of such owners may apply to the Board of Commissioners of Shell-Fisheries, who shall thereupon notify all parties in interest to file sworn statements of facts and copies of maps as claimed by them respectively, and said commissioners shall thereupon appoint a surveyor who shall take such maps and statements and lay out and survey the grounds in the various ways claimed, and if any town boundary comes into question he shall ascertain and report upon such boundary as it appears from the maps and records in the custody of the respective town clerks of such towns. Thereupon he shall report his doings, accompanied with the maps or copies of maps found by him touching the dispute to said commissioners, who shall thereupon summon all parties in interest before them at a time and place to be named in the summons, and after a full hearing of said parties, with their witnesses and counsel, said commissioners shall establish the line in dispute, and cause the same to be located and marked by ranges and buoys; and the line so established shall be the true dividing line between such grounds, unless an appeal is taken to the Superior Court, as provided for in section 2329, and said decision shall there be reversed; and the costs and expenses of such proceedings shall be equally divided between adjoining owners, who shall pay the same to said commissioners upon the filing of their decision, and the same shall be accounted for and paid to the State Treasurer for the benefit of the State; and the cases provided for by this section shall not be deemed included under section 2329,

SEC. 2333. All expenses necessarily incurred in carrying out the provisions of the five preceding sections, shall be audited by the Comptroller, and paid by the Treasurer of the State.

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## TAXES.

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SECTION 2334. All owners of shell-fish grounds lying within the exclusive jurisdiction of the State shall, on or before the first day of November, annually, deliver to the Board of Commissioners of Shell fisheries a statement under oath specifying the number of lots owned by them, the location and number of acres in each lot, the number of acres in each lot cultivated, and the value thereof per acre, the number of acres in each lot uncultivated, and the value thereof per acre; and printed blanks for such statements shall be prepared by said commissioners and furnished to such owners upon application to them or at their office; and upon the failure of any owner to deliver such sworn statement to said commissioners at their office within the time above specified, said commissioners shall make up such statement from the best information they may obtain, and shall add for such default ten per cent. to the valuation so made.

SEC. 2335. All statements so delivered or made shall be alphabetically arranged, and said commissioners shall equalize, if necessary, and determine the value of all the property so returned and described in said statements, which property shall be liable to taxation at the valuation so determined, including the ten per cent. for default as aforesaid; and said commissioners are authorized and empowered to declare and lay a tax thereon, annually, at the rate of one per cent. upon such valuations, which shall be payable at the office of said commissioners on and after the first Monday in May, annually; and said tax shall be a lien upon the grounds so taxed from the time it is so laid by said commissioners, until paid, and shall be in lieu of all other taxes on said grounds.

## PUBLIC ACTS, 1895.

### CHAPTER CIV.

SECTION 4. Section 2335 of the General Statutes is hereby amended by striking out the words "one per cent," in line eight and inserting in lieu thereof the words "one and one half per cent."



SEC. 2336. If any tax so laid shall not be paid on or before the first Monday in July, the said commissioners shall make and issue their warrant for the collection thereof, with interest thereon at one per cent. per month from the day such tax became due and payable until paid, together with the expenses of such collection, which warrant shall authorize any reputable person named therein to seize such grounds and any oysters or other shell-fish thereon, or any other property of the owner or owners thereof not exempt from execution, and to sell the same, or so much thereof as he may find necessary, at such time and place, and in such manner, and by such person as said commissioners may direct, whereupon such sale shall be so made, and such warrant shall immediately be returned to said commissioners by such person with all his doings endorsed thereon, and he shall pay over to said commissioners the money received upon said sale, and they shall apply the same to the payment of such tax and all the expenses thereon, including the expenses of such sale, returning any balance that may remain to such owner or owners; and all moneys received by said commissioners in payment of taxes and interest thereon shall be accounted for and paid to the State Treasurer for the benefit of the State, within thirty days from its receipt. Said commissioners shall each, in addition to the bond required by law, give a bond with surety in the sum of one thousand dollars to the State, conditioned for the performance of the duties imposed upon them by this and the two preceding sections.

SEC. 2337. All other shell-fish grounds lying within the waters of this State shall be taxed in the same manner in all respects as real estate in the several towns within the meridian lines of which such shell-fish grounds are situated, and no other tax or rental shall be laid or collected on said grounds, or the franchise of any person therein.

SEC. 2338. All expenses necessarily incurred in carrying out the provisions of the four preceding sections shall be audited by the Comptroller and paid by the Treasurer of the State.

SEC. 2339. The Board of Commissioners of Shell-fisheries are hereby authorized and empowered to file, at any time, a notice of any tax heretofore laid, or which may be hereafter laid, upon any oyster ground within State jurisdiction, in the town clerk's office of the town between whose meridian lines such oyster grounds, or any part thereof, may be situated, such notice to contain a description of such ground, the amount of tax laid thereon, the year and day when it became payable, and the name or names of the owner or

owners thereof; and such tax shall be a lien upon such ground from the time of filing such notice, as herein provided, until such tax is fully paid.

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## NATURAL OYSTER BEDS.

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SECTION 2326. The Superior Court of New Haven County, on the application of the selectmen of the town of Orange, and the Superior Court of any county, on the application of the oyster-ground committee of any town in said county, shall appoint a committee of three disinterested persons, not residents of the town within the boundaries of which any natural oysters, clam, or mussel bed exist, to ascertain, locate, and describe, by proper boundaries, all the natural oyster, clam, or mussel beds within the boundaries of such town. Said committee so appointed shall first give three weeks' notice, by advertising in a newspaper published in or nearest to said town, of the time and place of their first meeting for such purpose; they shall hear parties who appear before them, and may take evidence from such other sources as they may in their discretion deem proper, and they shall make written designations by ranges, bounds, and areas of all the natural oyster, clam, and mussel beds within the boundaries of the town they are appointed for, and shall make a report of their doings to the Superior Court, which report, when made to and accepted by said court and recorded in the records thereof, shall be a final and conclusive determination of the extent, boundaries, and location of such natural beds at the date of such report. It shall be the duty of the clerk of the court to transmit to the town clerk of each of said towns a certified copy of said report so accepted and recorded in relation to the beds of such town, which shall be recorded by such town clerk in the book kept by him for the record of applications, and designations, and conveyance of designated grounds. Such public notice of said application to the Superior Court, and of the time and place of the return of the same, shall be given by said selectmen or oyster-ground committee as any judge of the Superior Court may order. It shall be the duty of the selectmen of the town of Orange, and of the oyster committees of other towns, upon a written request, signed by twenty electors of their respective towns, to make such application to the Superior Court within thirty days after receiving a copy of such written

request, and said application shall be privileged, and shall be heard and disposed of at the term of said court to which such application is returned in preference to other causes. All expenses properly incurred by such selectmen and oyster-ground committees in said applications, and the doings thereunder, and the fees of said committees so appointed by court, shall be taxed by the clerk of said court and paid upon his order by the State. The fees of said committee so appointed by court shall not exceed five dollars per day for each member thereof, and shall be in full for all services, expenses, and disbursements under said appointment, and the Comptroller shall keep such expense in an account separate from that of the Board of Commissioners of Shell-fisheries. Any designation of ground for the planting or cultivation of shell-fish within the areas so established by such report of said committee shall be void.

SEC. 2328. The locations and descriptions of the natural oyster beds respectively under State jurisdiction are as follows, to wit:

CORMELL REEF NATURAL BED.

The southern point of this bed is the point which is two thousand five hundred and fifty-five feet due north of a point which is one thousand nine hundred and twenty-two feet due west of the center of the tower of Great Captains Island lighthouse. The said southern point is also determined by the following sextant angles: Little Captains Island coast survey signal to Americus,  $64^{\circ} 27'$ ; Americus to Mead,  $84^{\circ} 16'$ ; Americus to Portchester spire (Methodist),  $82^{\circ} 56'$ . From the said southern point the eastern boundary line runs north twenty-eight degrees east, true meridian, seven hundred feet, to buoy known as 1002 in commissioners' buoy records, and determined by the following sextant angles: Little Captains Island coast survey signal to Americus,  $70^{\circ} 47'$ ; Americus to Mead,  $90^{\circ} 03'$ ; Mead to Great Captains Island light-house,  $139^{\circ} 15'$ . The following ranges pertain to this point: first, Daniel Lyon, Jr.'s house on with High-water rock; second, sharp top tree in woods showing above all the woods, on with dock at the Americus club-house. Thence north thirteen degrees east, true meridian, one hundred and ninety feet to buoy known as 1003 in commissioners' buoy records, and determined by the following sextant angles: Little Captains Island coast survey signal to Americus,  $72^{\circ} 27'$ ; Americus to Mead,  $92^{\circ} 00'$ ; Mead to Great Captains Island light-house,  $135^{\circ} 27'$ . The following ranges pertain to this point: first, Methodist spire on with west end of sand beach on Calves Island; second, Rye Beach hotel on with gap or

cut in Jones' stones. Thence north sixty-six degrees west, true meridian, four hundred and thirty-five feet to buoy known as 998 in commissioners' buoy records, and determined by the following sextant angles: Little Captains Island coast survey signal to Americus,  $70^{\circ} 25'$ ; Americus to Mead,  $95^{\circ} 43'$ ; Mead to Great Captains Island light-house,  $139^{\circ} 05'$ . The following ranges pertain to this point; first, gap in woods on with white rock on south end of Calves Island; second, clump of woods on Long Island on with west bluff of bank of Great Captains Island. Thence south fifty-one degrees and fifteen minutes west, true meridian, nine hundred and ten feet to a point determined by the following sextant angles: Little Captains Island coast survey signal to Americus,  $62^{\circ} 20'$ ; Americus to Mead,  $90^{\circ} 14'$ ; Americus to Portchester spire (Methodist),  $88^{\circ} 42'$ . Thence south five degrees and fifteen minutes west, true meridian, two hundred and fifteen feet to buoy known as 1023 in commissioners' buoy records, and determined by the following sextant angles: Great Captains Island light-house to Americus,  $107^{\circ} 42'$ ; Americus to Calf,  $110^{\circ} 27'$ ; Summer-house to Great Captains Island light-house,  $107^{\circ} 27'$ . The following ranges pertain to this point: first, barn just south of bush's wood just open to the south of barn on Bower's Island; second, south edge of stone house on with white stone near the south end of Calves Island. Thence south seventy five degrees and twenty minutes east, true meridian, seven hundred and seventy-five feet to the point of beginning. The area comprised is fifteen acres.

#### PORTCHESTER BED.

Beginning at the northern point of the bed, said point being the southeast corner of ground of Isaac Martin. The said point is known as buoy number 479 in commissioners' buoy records, and is determined by the following sextant angles: Summer-house to Calf,  $131^{\circ} 17'$ ; Calf to Mead,  $76^{\circ} 54'$ ; Summer-house to Great Captains Island light-house,  $100^{\circ} 40'$ ; Great Captains Island light-house to Horse Neck spire,  $84^{\circ} 00'$ . The following ranges pertain to this point: first, the north side of Clifford's house opens about fifty feet west of the west side of Black Tom rocks; second, the south side of bathing-house of Edward Schell is in line with the north side of the high rock of the Black Tom rocks. (The bathing-house stands on the main shore southwest of the steamboat dock at Portchester.) From the said northern point the northern boundary line runs south sixty-five degrees and fifteen minutes west, true



meridian, across the highest part of Beach rock to the shore. The point on Beach Rock is determined by the following sextant angles: Summer-house to Calf,  $121^{\circ} 38'$ ; Calf to Horse Neck spire,  $47^{\circ} 54'$ ; Summer-house to Great Captains Island light-house,  $92^{\circ} 08'$ . From the said northern point, the eastern boundary line runs south fifty-three degrees and thirty five minutes east, true meridian, eight hundred and ninety feet, to buoy 481, at the south corner of the ground of George W. Martin. Thence south sixty-four degrees east, true meridian, one thousand eight hundred and fifty feet, to buoy 482. This point is determined by the following ranges: first, cupola of Abendroth's house over slim cedar tree, the west one of several, standing on the mainland and near the shore; second, the south side of woods on Rye Point, in line with bottom of bluff on south end of Manursing Island. Thence south sixty-six degrees and forty-five minutes east, true meridian eight hundred and seventy-five feet to buoy 1076, the same being the south corner of ground of George Martin and Sons. Thence south four degrees west, true meridian, six hundred and eighty feet to buoy 514, at the north corner of ground of David B. Chard. This point is determined by the following ranges: first, bluff on Lloyd's Neck on with high-water mark at west end of Great Captains Island; second, liberty cap on large white boulder at the extreme west end of Brush Island over spindle on Jones' stones. Thence south thirty-one degrees and fifty minutes west, true meridian, along last mentioned range-line along ground of David B. Chard and on public domain, one thousand eight hundred and fifteen feet. Thence north sixty-seven degrees and fifteen minutes west, true meridian, one thousand four hundred and fifteen feet, in a line passing through buoys 489 and 490, and ranging; first, south side of a large tree on hill on with two cedar trees standing at the shore and nearly in line, and also in line with north end of steamboat dock. Thence north thirty-one degrees east, true meridian, three hundred and eighty-five feet along ground owned or occupied by William Maguire to buoy 510. Thence north fifty-nine degrees and twelve minutes west, true meridian, one thousand four hundred and eighty feet to Big Captains Island rock. This line ranges south chimney of Brooks' house over cedar bush stuck on the Big Captains Island rock. The said rock is known in commissioners' buoy book records as position 486. Thence north fifty-five degrees west, true meridian, one thousand seven hundred and sixty feet to position 478, the same being a hole drilled near the center of the outer rock at Bryam Point. A cedar

bush stands in the hole. Thence northerly along the east bank of Bryam Point to intersect the northern boundary line of the bed, The area of this bed is two hundred and eighteen acres.

The following sextant angles are of record as determining the positions and points mentioned in the proceeding description, namely :

481—Summer-house to Great Captains Island light-house,  $117^{\circ} 42'$ ; Great Captains Island light-house to Horse Neck spire,  $84^{\circ} 30'$ ; Great Captains Island light-house to Mayo,  $82^{\circ} 10'$ .

482—Great Captains Island light-house to Calf,  $97^{\circ} 31'$ ; Calf to Summer-house,  $117^{\circ} 26'$ ; Great Captains Island light house to Mayo,  $89^{\circ} 07'$ .

1076—Great Captains Island light-house to Mayo,  $91^{\circ} 46'$ ; Mayo to Summer-house,  $113^{\circ} 44'$ ; Great Captains Island light-house to Calf,  $116^{\circ} 07'$ .

514—Great Captains Island light-house to Calf,  $102^{\circ} 47'$ ; Calf to Summer-house,  $86^{\circ} 11'$ ; Great Captains Island light-house to Rock,  $66^{\circ} 41'$ ; Rock to Mead,  $54^{\circ} 21'$ .

489—Great Captains Island light-house to Calf,  $69^{\circ} 29'$ ; Calf to Rye spire,  $103^{\circ} 09'$ .

490—Great Captains Island light-house to Calf,  $62^{\circ} 44'$ ; Calf to Summer-house,  $97^{\circ} 33'$ .

510—Great Captains Island light-house to Calf,  $62^{\circ} 43'$ ; Calf to Summer-house,  $111^{\circ} 43'$ ; Great Captains Island light-house to Mead,  $94^{\circ} 33'$ ; Mead to Summer-house,  $79^{\circ} 49'$ .

486—Great Captains Island light-house to Mead,  $88^{\circ} 50'$ ; Mead to Summer-house,  $119^{\circ} 01'$ .

478—Summer-house to Great Captains Island light-house,  $83^{\circ} 00'$ ; Great Captains Island light-house to Horse Neck spire,  $70^{\circ} 30'$ ; Great Captains Island light-house to Mayo,  $64^{\circ} 25'$ .

#### GREAT CAPTAINS ISLAND NATURAL BED.

Beginning at the point of intersection of a line due east of the Great Captains Island light-house, with a line ranging northerly and southerly over the steeple of the Methodist church in Greenwich and the west end of the building standing near the end of the steam-boat dock; thence running southerly along the last mentioned line about one thousand four hundred feet to a point of its intersection with a line ranging over a gap in the high woods which are north and east of Reuben B. Lockwood's house in old Greenwich, or Sound Beach, and low-water mark southeast of the clump on Little Captains Island. This point, known as number 521 in commission-



ers' buoy book, is determined by the following sextant angles; namely: Stamford light-house on Horse Neck spire,  $62^{\circ} 19'$ ; Horse Neck spire to Rye spire,  $91^{\circ} 13'$ ; Stamford light-house to Americus,  $59^{\circ} 17'$ ; Americus to Bloomer,  $59^{\circ} 24'$ . Thence running westerly on a straight line to a point formed at the intersection of two lines, one ranging over the north side of the high part of the Rye Beach hotel and the south side of the gap in the woods on a distant hill in Rye, and the other ranging over the spire of the Second Congregational church at Greenwich and a small elm tree on the west end of Great Captains Island. This point, known in commissioners' buoy book as number 421, is determined by the following sextant angles: Little Captains Island to Calf,  $67^{\circ} 03'$ ; Calf to Summer-house,  $42^{\circ} 39'$ ; Stamford light-house to Mayo,  $61^{\circ} 27'$ ; Mayo to Rye spire,  $84^{\circ} 06'$ . The west side of the bed follows the last-mentioned range line to the high-water line on the south side of Great Captains Island; thence easterly following said high-water line, to a point which is due east from the center of the tower of the Great Captains Island light-house; and thence due east to the point of beginning. The area of this bed is one hundred and fifty-two acres.

## FIELD POINT NATURAL BED.

Beginning at a point in the commissioners' line of jurisdiction, where it is intersected by a line ranging over the steeple of the Second Congregational church at Greenwich and the extreme east end of the "marble house," formerly used as a marble factory, which stands near the steamboat dock; running thence southerly along said range line to its point of intersection known in commissioners' buoy book as number 453, with a line ranging westerly over the church spire at Rye, N. Y., and the south gable of the westernmost house on Calf Island. Said point is determined by the following sextant angles; Americus to Mead,  $99^{\circ} 20'$ ; Mead to Great Captains Island light-house,  $82^{\circ} 30'$ ; Horse Neck spire to Portchester spire,  $77^{\circ} 29'$ ; Portchester spire to Great Captains Island light-house,  $93^{\circ} 30'$ . Thence running easterly to a point known in commissioners' buoy book as number 455, formed at the intersection of two lines; one line ranging westerly over a large tree in Portchester and the center of the eastern house on Calf Island (a slim cedar tree is in the same range), and the other line ranging northerly over the steeple of the Second Congregational church at Greenwich and the west side of Black Rock, west

of the Americus house. This point may be found by the following sextant angles: Americus to Mead,  $90^{\circ} 15'$ ; Mead to Great Captains Island light-house,  $75^{\circ}$  to  $27'$ . Horse Neck spire to Portchester spire,  $75^{\circ} 11'$ ; Portchester spire to Great Captains Island light-house,  $86^{\circ} 00'$ . Thence running southwesterly to a point known in commissioners' buoy book as number 456, formed at the intersection of three lines: the first line ranging westerly over the northeast section of the north house on Calf Island and the north cedar tree at the shore on the east side of Calf Island; the second line ranging also westerly over the south edge of the Brooks house and the north side of the shed which stands northeast of the barns on Calf Island; and the third line ranging northerly over the steeple of the Second Congregational church at Greenwich and the flagpole on the west end of Caleb Holmes' storehouse. This point is determined by the following sextant angles: Americus to Mead,  $98^{\circ} 54'$ ; Mead to Great Captains Island light-house,  $93^{\circ} 55'$ ; Horse Neck spire to Portchester spire,  $75^{\circ} 48' 30''$ ; Portchester spire to Great Captains Island light-house,  $103^{\circ} 48'$ . Thence running northwesterly to a point, known in commissioners' buoy book as number 457, formed at the intersection of two lines; one line ranging over Lloyd's Neck Bluff on the east side of the east clump at Little Captains Island, at about half the height of the clump, and the other line ranging over the east end of the dining-room of the Americus house and the center of the white rock at the extreme south end of Field Point. This point is determined by the following sextant angles: Little Captain commissioners' signal to Americus,  $87^{\circ} 27'$ ; Americus to Mead,  $128^{\circ} 37'$ ; Americus to Portchester spire,  $113^{\circ} 37'$ ; Portches spire to Great Captains Island light house,  $118^{\circ} 46'$ . Thence running northerly to the line of jurisdiction between the State and town in the direction of a point, known in commissioners' buoy book as number 458, formed at the intersection of two ranged lines, one running easterly over the high part of the bluff on the north side of Little Horseshoe in Cos Cob harbor and the point where the black and white rocks on the extreme southeast end of Field Point come together; and the other line running westerly over the north side of the old Benjamin Merritt house, just clear of the cedars and the southwest end of Otter Rocks. This point is a little north of said line of jurisdiction, and is determined by the following extant angles: Stamford light-house to Great Captains Island light-house,  $87^{\circ} 04'$ ; Great Captains Island light-house to Bloomer,  $107^{\circ} 06'$ ; Great Captains Island light-house to Portchester spire,  $110^{\circ} 57'$ .

The northern side of this bed follows the line of jurisdiction between the State and town. The area of bed is eighty-four acres.

#### GREENWICH POINT NATURAL BED.

Beginning at a point at the intersection of the line of jurisdiction between State and town with a line ranging Seth Quintard's house over Ami Ferris's old house; thence running southerly on said range line to its point of intersection with a line ranging westerly over the round-topped tree in Rye and the south side of Great Captains Island at low water; thence westerly along said last-mentioned range line to its point of intersection with a line ranging about north-westerly over the steeple of the Second Congregational church at Greenwich opening west of Flat Neck woods; thence northwesterly along the last-mentioned range line to where it intersects the line of jurisdiction between the State and town; thence easterly along said line to the point of beginning. The eastern line of the bed is a line which passes through two points which are determined by the following sextant angles, namely: First point, Stamford light house to Greenwich Point,  $105^{\circ} 49' 20''$ ; Greenwich Point to Great Captains Island light-house,  $52^{\circ} 17'$ ; Stamford light-house to Horse Neck spire,  $99^{\circ} 13'$ ; Horse Neck spire to Great Captains Island light-house,  $58^{\circ} 57'$ . Second point, Stamford light house to Greenwich Point,  $82^{\circ} 35'$ ; Greenwich Point to Great Captains Island light-house,  $63^{\circ} 32'$ ; Stamford light-house to Horse Neck spire,  $88^{\circ} 59'$ ; Horse Neck spire to Great Captains Island light-housh,  $57^{\circ} 04'$ . The southern line of the bed is a line which passes through two points which are determined by the following sextant angles: First point: Stamford light-house to Horse Neck spire,  $82^{\circ} 38' 30''$ ; Horse Neck spire to Great Captains Island light-house,  $55^{\circ} 38'$ . Second point: Stamford light-house to Horse Neck spire,  $84^{\circ} 43'$ ; Horse Neck spire to Great Captains Island light-house,  $61^{\circ} 05'$ ; Stamford light-house to Greenwich Point,  $47^{\circ} 23'$ ; Greenwich Point to Great Captains Island light-house,  $98^{\circ} 24'$ . The point last given is the southwest corner of the bed. The area comprised is four hundred and three acres.

#### FAIRFIELD BAR AND FAIRFIELD NATURAL BEDS.

These two beds are contiguous, and the portions thereof within State jurisdiction are as follows: Beginning at the center of the tower of the Penfield Reef light-house, and starting from this point as the southeast corner of these beds, the southern boundary line

runs south eighty-one degrees and twenty-four minutes west, true meridian, eleven thousand five hundred and fifteen feet to the extreme south point of the three large flat rocks at the southern end of Sunken Island. Said point is located by the following sextant angles: Penfield Reef light-house to Episcopal spire in Fairfield,  $63^{\circ} 10'$ ; Episcopal spire in Fairfield to Jennings' house,  $90^{\circ} 26'$ ; thence due west twelve thousand three hundred and twenty-three feet to a rock known as "the fishing rock." Said rock is situated southerly of Farms Point, and is determined by the following sextant angles: Scott's house to Jennings' house,  $38^{\circ} 47'$ ; Jennings' house to Burnham's barn,  $111^{\circ} 11'$ ; Scott's house to Farms Point,  $74^{\circ} 53'$ ; thence from "the fishing rock" due north to the commissioners' line of jurisdiction; thence, easterly along said line of jurisdiction to Pine Creek Point; thence still following the said line of jurisdiction to Shoal Point; thence along the Fairfield bar to a point due north of the center of the tower of the Penfield Reef light-house; thence due south to the point of beginning. The area comprised is one thousand two hundred and thirty-seven acres.

#### BRIDGEPORT NATURAL BED.

The part in State jurisdiction is described as follows: The southeast corner of this bed is the point which is three hundred and sixteen feet due east of a point which is one thousand one hundred and thirty-two feet due south of the center of the tower of the Bridgeport light-house. The said southeast corner is the northeast corner of ground of David N. Armstrong. From the southeast corner the southern boundary line runs due west along ground of said Armstrong, a distance of one thousand nine hundred and thirty feet, to a point which has the following ranges: first, Black Rock light-house over the center of the woods on Wakeman's Island; second, soldiers' monument over the center of the grain elevator; thence northerly along the last-mentioned range line and along ground of Charles H. Armstrong, a distance of six hundred feet; thence south sixty-four degrees and fifty-seven minutes west, true meridian, four thousand one hundred and twenty feet along ground of said Armstrong; thence due south six hundred and sixteen feet along ground of said Armstrong to the northwest corner of ground of Wheeler Hawley; thence south sixty-four degrees and fifty-seven minutes west, true meridian, one hundred and seventy feet along ground of Charles J. Nash. (The said bearing ranges Black Rock lighthouse over the center of the woods on Wakeman's Island.) Thence



south nine degrees west, true meridian, five hundred and eighty feet along ground of said Nash; thence south thirty-four degrees and fifty-two minutes west, true meridian, one thousand three hundred and twenty feet along ground of said Nash; thence south eighty-one degrees and forty five minutes west, true meridian, three thousand seven hundred and twenty feet in a direct line towards the Black Rock light-house to the east shore of Fayerweather's Island at the high-water line; thence northerly along said east shore about four hundred and fifty feet to the line of jurisdiction between the State and town; thence northeasterly along said line of jurisdiction nine thousand four hundred and twenty feet to the extreme south point of the sea wall at Seaside Park; thence southeasterly along said line of jurisdiction two thousand eight hundred and seventy-five feet; thence due south one thousand three hundred and fifty feet to the point of beginning. The area thus comprised is three hundred and thirty-four acres.

## STRATFORD NATURAL BED.

Beginning at a point in the commissioners' line of jurisdiction, distant about one thousand eight hundred and thirty feet northeasterly from the center of the tower of the new Stratford Point light-house; thence running due south to a point which is determined by the following sextant angles: "Fish" to Stratford Point light-house,  $105^{\circ} 47'$ ; Stratford Point light-house to Middle Ground light-house,  $114^{\circ} 26'$ ; Stratford Point light-house to Penfield Reef light-house,  $45^{\circ} 11'$ . ("Fish" is the factory chimney of the oil works at Welch's Point.) The point thus located is the southeast corner of the bed, and it may also be found by intersecting the following range lines: One range line running northerly along the edge of the roof on the easterly side of the light-house keeper's new house, near the Stratford Point light-house; the other range line running northeasterly over the southeast side or face of the old hotel on Charles Island, and a tall, prominent tree at the left side of a little gap in the woods on the northern slope of a distant hill. This gap may be found by beginning at the fish works at Welch's Point and looking northerly along the crest of hills until you pass four prominent single trees, which rise above the top of the general wood line. The four trees stand near the right hand side of the gap. At the said southeast corner, the compass bearing to the tower of the Stratford Point light-house, is northwest



by west, and the distance to the same is one thousand four hundred and sixty feet; thence from said southeast corner running in a southwesterly direction a distance of twelve thousand two hundred and fifty feet to a point which is determined by the following sextant angles: Penfield Reef light-house to Middle Ground light-house,  $99^{\circ} 07' 30''$ ; Middle Ground light-house to Stratford Point light-house,  $115^{\circ} 27'$ ; Stratford Point light-house to Bridgeport light-house,  $97^{\circ} 07'$ ; Bridgeport light house to Penfield Reef light-house,  $48^{\circ} 18'$ . The approximate compass bearing of this line is southwest by west three-eighths west. The terminal point of this line is the extreme south point of the bed, and is also further determined by the intersection of the following range lines: Northerly, over Ambler's house at Nichols Farms, Trumbull, and the middle poplar of the five poplar trees near the shore at Point-no-Point, on which is termed the Lordship farm. The compass bearing of this range line is north by east. Northwesterly, over cupola of P. T. Barnum's house, at Bridgeport, and the center of the dwelling house attached to the Bridgeport light-house. Northwesterly again, over the cupola of Dr. Warner's house at Seaside Park, Bridgeport, and the west tree of the five single trees on a ridge in the distance. The compass bearing of this range is northwest one-half north. Thence running northwesterly on a line in the direction of the spire of the Congregational Church, at Fairfield, a distance of thirteen thousand eight hundred and thirty feet, to its point of intersection with a line ranging northerly over the factory chimney of the Read Carpet Company, at Bridgeport, and the Soldier's Monument at Seaside Park. Thence northerly along said last mentioned range line to ground designated to Robert E. DeForest; thence due east to southeast corner of said designation; thence due north to the commissioners' line of jurisdiction; thence easterly along said line to the point of beginning. The area comprised is three thousand and fifty-five acres.

#### ROTON POINT AND FISH ISLAND NATURAL BEDS.

The part in State jurisdiction is described as follows: The northeast corner is a point which is thirty-five feet due south of a copper bolt set at the extreme south end of Bell Island. Said bolt is a triangulation station and is known as "Bell Island." From said northeast corner the northern boundary line runs south eighty-one degrees and twelve minutes west along the commissioners' line of jurisdiction in the direction of the position known of record in the

buoy records as 1954, a distance of five thousand eight hundred and sixty-five feet to the east line of ground of Oliver Cook. (Said east line starting from a position known of record in the buoy records as number 1882, *i. e.*, the extreme edge of Moll's Rock showing at low water, and running to position 1887, *i. e.*, the extreme east edge of Peat's rocks at low water.) Thence south twenty-three degrees and fifteen minutes west and passing through position 1887, one thousand five hundred and eighty-five feet to position 1892. (Said position 1892 being the northeast corner of rocks on Fish Island at low water.) Thence south twenty-seven degrees and forty-five minutes west seven hundred and twenty feet to buoy 1234 at the northeast corner of ground of William I. Stevens; thence south four degrees and forty-five minutes west five hundred and twenty feet, to buoy 1191 at the southeast corner of said Stevens' ground; thence north seventy-four degrees and sixteen minutes east three thousand five hundred and sixty feet, to position 1900; thence north seventy-eight degrees and seven minutes east two thousand nine hundred and fifty-five feet, to buoy 1175 at the southwest corner of Charles W. Bell; thence north twenty-seven degrees east six hundred and fifteen feet to buoy 1176; thence south seventy-three degrees east three hundred and forty feet to buoy 1466; thence north twenty-two degrees and thirty minutes east one thousand and twenty feet to the commissioners' line of jurisdiction, said bearing being in line with buoy 1873; thence north forty-three degrees and thirty minutes west along said line of jurisdiction seven hundred and sixty feet to the point of beginning. All bearings are true meridian. The area comprised is three hundred and seven acres.

The following sextant angles determine the positions and points mentioned in the preceding description, namely:

1954—Collender to Cedar Tree (Fish Island),  $79^{\circ} 15'$ ; Cedar Tree (Fish Island) to Bell Island,  $71^{\circ} 05'$ ; Cedar Tree (Fish Island) to Norwalk light-house,  $55^{\circ} 49'$ .

1882—Collender to Cedar Tree (Fish Island),  $28^{\circ} 30'$ ; Cedar Tree (Fish Island) to Norwalk light-house,  $105^{\circ} 40'$ ; Cedar Tree (Fish Island) to Norwalk Spindle,  $92^{\circ} 54'$ ; Norwalk Spindle to Pike,  $60^{\circ} 50'$ .

1887—Bell Island to Centennial,  $100^{\circ} 20'$ ; Centennial to Collender,  $91^{\circ} 19'$ ; Norwalk Spindle to Pike,  $63^{\circ} 58'$ .

1892—Norwalk Spindle to Pike,  $63^{\circ} 10'$ ; Pike to Centennial,  $49^{\circ} 08'$ ; Norwalk light house to Pike,  $51^{\circ} 31'$ .

1534—Norwalk light-house to Centennial,  $86^{\circ} 24'$ ; Centennial to Collender,  $110^{\circ} 48'$ ; Bell Island to Centennial,  $65^{\circ} 23'$ .

1191—Norwalk light-house to Colyer,  $82^{\circ} 59'$ ; Colyer to Collender,  $106^{\circ} 47'$ ; Norwalk Spindle to Bell Island,  $32^{\circ} 29'$ .

1900—Chimons to Pike,  $72^{\circ} 19'$ ; Pike to Collender,  $97^{\circ} 55'$ ; Tavern Island to Pike,  $62^{\circ} 51'$ .

1175—Norwalk light-house to Bell Island,  $82^{\circ} 41'$ ; Bell Island to Colyer,  $91^{\circ} 49'$ ; Chimons to Bell Island,  $48^{\circ} 23'$ ; Bell Island to Collender,  $118^{\circ} 02'$ ,

1176—Norwalk light-house to Bell Island,  $96^{\circ} 14'$ ; Bell Island to Colyer,  $91^{\circ} 08'$ ; Chimons to Bell Island,  $55^{\circ} 53'$ ; Bell Island to Collender,  $114^{\circ} 07'$ .

1466—Chimons to Bell Island,  $67^{\circ} 26'$ ; Bell Island to Centennial,  $77^{\circ} 54'$ ; Norwalk light-house to Depot,  $89^{\circ} 10'$ .

1873—Chimons to Depot,  $53^{\circ} 41'$ ; Depot to Centennial,  $103^{\circ} 07'$ ; Chimons to Bell Island,  $110^{\circ} 43'$ .

## PUBLIC ACTS, 1893.

### CHAPTER CCXXV.

SECTION 1. Chapter CX of the Public Acts of 1893 is hereby amended to read as follows: The Shell Fish Commissioners shall cause those natural or public oyster beds in the exclusive jurisdiction of this State known as the Stratford Bed, the Fish Island and Roton Point Beds, the Bridgeport Bed, and the Fairfield Bed, to be marked by buoys, which shall be known as State Buoys, and by range monuments on the shore by which the lines can be relocated should any buoys be removed, and shall cause double buoys or a distinctive mark to be placed at any point on the boundary where the line changes in direction, and said buoys shall be maintained by the State. No buoys shall be so set in lines so run as to include within the natural or public beds any private or designated grounds.

SEC. 2. Any person injuring or removing such range monuments, or displacing such State Buoys, shall be fined not more than fifty dollars, or imprisoned not more than thirty days, or both.

SEC. 3. After the first day of January, 1894, the Shell-Fish Commissioners shall not expend during any one year, under the provisions of this Act, a sum exceeding one-half the amount received for licenses to work on the natural or public beds of the State during the year preceding.

SEC. 2327. The selectmen of the town of Orange and the committees of other towns shall, at the expense of their respective towns, procure and cause to be lodged and kept in the office of the town clerk of each town respectively, accurate maps showing the boundary lines of their said towns in the navigable waters of the State, and all designations of ground for the cultivation of shell-fish heretofore made and that shall hereafter be made within such boundaries, and shall numbers aid designations on said maps, and shall cause to be designated on such maps all natural oyster, clam, and mussel beds lying within their several towns respectively, as the same shall be ascertained by said report of said committees so recorded in said towns, as hereinbefore provided.

## PUBLIC ACTS, 1895.

### CHAPTER LXXXI.

SECTION 1. Chapter XC of the Public Acts of 1893, is hereby amended to read as follows: Every person who shall, between the twentieth day of July and the tenth day of September, in any year, gather or take any oysters or shells from any natural oyster beds within the exclusive jurisdiction of the State, and every person who shall, between the first day of January and the tenth day of September, in any year, gather or take any oysters or shells in the Housatonic River shall be fined not more than fifty dollars, or imprisoned not more than thirty days, or both; *provided*, that nothing in this Section shall be constructed to prohibit the gathering or taking of shells or mussels by the use of tongs, in said Housatonic River, below a line drawn from a stake on the west bank of said River at Quimber's Neck Point, so called, and running thence in a northeasterly direction to a stake on the east side of the channel of said River. Said stake shall be located at said points by the Board of Selectmen of the Town of Stratford, and a certificate of such location by said Board shall be recorded in the office of the Town Clerk of said Town of Stratford.

## PUBLIC ACTS, 1895.

### CHAPTER CXI.

SECTION 1. The Board of Commissioners of Shell-Fisheries shall, annually, appoint some person to be Inspector of Natural Oyster Beds, who shall hold office until his successor is appointed and qualified.



SEC. 2. It shall be the duty of said Inspector to detect and prosecute offenses against the shell-fishery laws relating to the natural oyster beds within the exclusive jurisdiction of the State and to the Housatonic River, and for such purpose he shall have the power to go upon any boat or vessel that is being employed upon said beds, or in said river, and may examine any dredges, tongs, or other tools or machinery used thereon, and he shall have the same powers as other officers to arrest for any violation of said laws, and shall be entitled to the same fees as other officers for making such arrests, in addition to the compensation hereinafter provided.

SEC. 3. Prosecutions may be brought for any violations of said shell-fishery laws, in the same manner as is now provided, and the provisions of this Act shall not be construed to affect the powers of other officers to make arrests for any violation of said laws.

SEC. 4. Any boat or vessel illegally used by any person, upon the natural oyster beds of the State or in the Housatonic River, shall be liable to seizure under the penalties provided in Section 2400 of the General Statutes, and such seizure may be made by said Inspector of Natural Oyster Beds, either within the town where the offense is committed, or wherever within this State said boat or vessel may be found, within one year after the commission of the offense.

SEC. 5. It shall be the duty of said Inspector of Natural Oyster Beds to report to the Board of Commissioners of Shell-Fisheries the failure of any person to comply with the provisions of Chapter CLXXI of the Public Acts of 1893, and upon the conviction of any person of the offense of dredging upon the natural oyster beds within State jurisdiction, without a license therefor as therein provided, such person so convicted shall be disqualified from receiving a license to gather oysters from said natural oyster beds within the exclusive jurisdiction of the State, for the remainder of the year for which a license might have been granted, and upon the conviction of any person to whom a license was granted, of any violation of the provisions of said Chapter, the license so granted to him shall be revoked. Said Inspector of Natural Oyster Beds shall also report to the Board of Commissioners of Shell-Fisheries any displacement of the buoys provided for in Chapter CX of the Public Acts of 1893.

SEC. 6. Said Inspector of Natural Oyster Beds shall be paid a salary of four hundred dollars per annum, by the Board of Commissioners of Shell-Fisheries, or a proportionate amount thereof for



such period as he shall hold said office, and said Board of Commissioners of Shell-Fisheries may remove him for cause, and appoint his successor for the remainder of said term.

SEC. 7. Said Inspector of Natural Oyster Beds, shall, at his own expense, maintain a suitable boat or vessel to be used in the discharge of the duties herein imposed, and he shall at all times, during such period of the year as said Board may prescribe, have said boat or vessel in readiness to investigate any alleged violation of said laws.

## BOATS AND BOAT LICENSES.

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PUBLIC ACTS, 1893.

### CHAPTER CLXXI.

SECTION 1. No person shall take or gather any oysters from any natural oyster bed in the exclusive jurisdiction of the State in any boat or vessel unless said boat or vessel shall be duly licensed and numbered in the manner hereinafter provided.

SEC. 2. Any person, desiring to use any boat or vessel for such purpose, may make written application to the Clerk of Shell-Fisheries, stating the name, owner, rig, general description, tonnage, and place where any such boat or vessel is owned, and said Clerk of Shell-Fisheries shall issue to the owner of such boat or vessel a license to take and gather oysters from the natural oyster beds in the exclusive jurisdiction of the State for one year, unless sooner revoked, upon the payment of two dollars for a vessel or boat of under five tons, and for a vessel or boat exceeding five tons fifty cents for each additional ton, custom-house measurement; *provided*, that before such license is granted, the owner or master shall prove to the satisfaction of said Clerk of Shell-Fisheries, that such boat or vessel is legally entitled to work on the public beds of the State, and that the captain and crew of such boat or vessel have been residents of this State for one year next preceding the date of such license, and that the dredges and other contrivances do not weigh more than thirty pounds, as provided in Section 2404 of the General Statutes. Every boat or vessel so licensed shall, while at work upon any of the natural oyster beds of the State, display upon both sides of the peak of her mainsail, the number of such license, in black figures, not less than one foot in length, and the

coat of arms of Connecticut painted or stenciled upon cloth of suitable and uniform material, to be attached or stitched to the sail. The Clerk of Shell-Fisheries shall furnish such numbers and coat of arms when the license is granted. When any boat or vessel so licensed shall be sold to parties in this State, the license shall be transferred at the office of the Clerk of Shell-Fisheries. Should said boat or vessel be sold out of the State, the license must be surrendered to the Clerk of Shell-Fisheries.

SEC. 3. No boat or vessel so licensed shall use on the natural oyster beds of this State any naphtha, vapor, steam or electric engine, or device for hoisting or operating dredges, or other devices for gathering oysters, except by hand power.

SEC. 4. Any person using any boat or vessel in violation of any of the provisions of this act, or who shall use any device or number not furnished by the Clerk of the Commissioners of Shell-Fisheries for such boat or vessel, or not bearing the coat of arms of the State, shall be liable to a fine of ten dollars for each day that said boat or vessel shall be so unlawfully used, and any boat or vessel which shall be found being used contrary to the provisions of this act, shall be liable to the penalties provided in Section 2400 of the General Statutes.

SEC. 5. Nothing in this act shall be construed as applying to any boat or vessel while used upon private oyster grounds.

SEC. 6. Whenever the Clerk of Shell-Fisheries shall be unable to act on account of sickness or absence, any one of the Shell-Fish Commissioners shall have power to grant licenses and perform all other duties of the Clerk under this act.

## PUBLIC ACTS, 1893,

### CHAPTER XX.

Section two of Chapter CLXXI of the Public Acts of 1893, being an Act Concerning Licenses for Oyster Boats and Vessels, is hereby amended by inserting after the words "for one year," the words "from the twentieth day of July in each year," so that the first sentence of said Section as amended shall read as follows: Any person, desiring to use any boat or vessel for such purpose, may make written application to the Clerk of Shell-Fisheries, stating the name, owner, rig, general description, tonnage, and place where any such boat or vessel is owned, and said Clerk of Shell-Fisheries shall issue to the owner of such boat or vessel a license

to take and gather oysters from the natural oyster beds in the exclusive jurisdiction of the State for one year, from the twentieth day of July in each year, unless sooner revoked, upon the payment of two dollars for a vessel or boat of under five tons, and for a vessel or boat exceeding five tons fifty cents for each additional ton, Custom-house measurement; *provided*, that before such license is granted the owner or master shall prove to the satisfaction of said Clerk of Shell-Fisheries that such boat or vessel is legally entitled to work on the public beds of the State, and that the captain and crew of such boat or vessel have been residents of this State for one year next preceding the date of such license, and that the dredges and other contrivances do not weigh more than thirty pounds, as provided in Section 2404 of the General Statutes.

#### PUBLIC ACTS, 1893.

##### CHAPTER CCLXII.

Chapter CLXXI of the Public Acts of 1893 is hereby amended by adding to the second section thereof the following words: Any license granted to any person who, during the period for which said license is granted, removes from the State shall be revoked.

#### PUBLIC ACTS, 1895.

##### CHAPTER LXXXI.

SECTION 2. No person shall take or gather any oysters or shells in the Housatonic River, in any boat or vessel, unless said boat or vessel shall have been duly licensed and numbered in the manner hereinafter provided, and only by the use of tongs. For the purpose of this Act, the Housatonic River shall be deemed to extend to a line extending from the southern extremity of the Breakwater at the mouth of the River to Stratford Point, so called.

SEC. 3. Any person desiring to use any boat or vessel for the purpose specified in the preceding Section, may make written application to the Shell-Fish Warden in the Town of Stratford, who shall be appointed by the Board of Commissioners of Shell-Fisheries, as provided in Section 2311 of the General Statutes, or if there be more than one Shell-Fish Warden in said town, then to such Shell-Fish Warden as the Board of Commissioners of Shell-Fisheries shall designate, in which said application shall be stated, under oath, the name of the owner, and a general description

of such boat or vessel, the residence of said applicant, the length of time that he has been a resident of this State, and the place or places in which he has resided for a year prior to the date of said application; and said Shell-Fish Warden shall thereupon issue to said applicant a license to take and gather oysters and shells by the use of tongs, in said Housatonic River, for a period from the tenth day of September, in the year in which said application is made, to the first day of January following, unless sooner revoked, upon payment to said Shell-Fish Warden of two dollars for each boat or vessel to be so used, of which one dollar may be retained by said Shell-Fish Warden as his fee, and the remainder shall be paid to the Board of Commissioners of Shell Fisheries; *provided*, that before such license is granted, said applicant shall prove to the satisfaction of said Shell-Fish Warden, that he has been a resident of this State for one year next preceding the date of said application, and that no person who has not been a resident of this State for one year prior thereto is employed by him or engaged upon said boat or vessel. Said Shell-Fish Warden shall keep a record of said applications and licenses, with the number of said boats or vessels, which number he shall furnish to said applicant upon the granting of a license; and said number shall be painted in a conspicuous manner, and as prescribed by said Shell-Fish Warden, upon each side of the bow of such boat or vessel while engaged in said work.

SEC. 4. Any person using any boat or vessel in violation of any of the provisions of this Act, or who shall use, in said Housatonic River, any number not furnished by said Shell-Fish Warden for said boat or vessel, shall be liable to a fine of ten dollars for each day that said boat or vessel shall be so used, and any person violating the provisions of this Act, so far as the same apply to the Housatonic River, may be prosecuted in the Town of Stratford, and upon conviction his license shall be revoked, and he shall be disqualified from receiving a license for the remainder of the period for which said license was granted.

SEC. 5. Nothing in this Act shall be construed as applying to any boat or vessel while used upon private oyster grounds, or as affecting the jurisdiction of courts under existing laws.

SEC. 6. Any boat or vessel illegally used by any person for taking any oysters or shells from the natural beds within the exclusive jurisdiction of the State, or in the Housatonic River, shall be liable to seizure under the penalties provided in Section 2400 of



the General Statutes, and such seizures may be made either within the town where the offense is committed, or wherever, within this State, said boat or vessel may be found, within one year after the commission of the offense.

SEC. 7. The provisions of this Act shall not be so construed as to affect the right to construct or dig channels, as provided for in Chapter CXXVIII of the Public Acts of 1889, or to prevent the taking of clams from any of the waters of this State.

## PUBLIC ACTS, 1893.

### CHAPTER XCIV.

Section 2400 of the General Statutes is hereby amended to read as follows: All sheriffs, deputy sheriffs, and constables shall, and any other person may, seize any boat or vessel illegally used in dredging, with its tackle, apparel, and furniture, wherever found within one year thereafter; and shall forthwith give notice thereof to two justices of the peace, or if in New Haven County, or in Fairfield County, to any City Court, of the county where the seizure was made; which authority shall forthwith order reasonable notice to be given to the person who is in possession of the property seized, or to the owner thereof, if known, of the time and place of trial; and shall, at the time appointed, determine whether such property was used contrary to law; and, if found to have been so used, shall order it to be sold in such manner as said authority shall direct; and the avails thereof, after deducting all costs and charges which said authority may allow, shall be paid, half to the person who made the seizure, and half to the town where the offense was committed. If such property be found not to have been used contrary to law, then all costs and charges which said authority may allow, shall be paid by the state in the manner provided for the payments of costs in criminal causes coming to the Superior Court from an inferior court.

## PUBLIC ACTS, 1895.

### CHAPTER CXCVI.

SECTION 1. Chapter XCIV of the Public Acts of 1893 is hereby amended by erasing the last sentence thereof and inserting in lieu thereof the following: If such property be found not to have been illegally used in dredging, or said cause for any reason be dis-



missed or withdrawn, then all costs and charges which said authority may allow shall be paid to the owner by the person making said seizure, and such person may, at any time during the pendency of said cause, be required by said authority to enter into a sufficient recognizance to said owner, with surety, conditioned for such payment in said event. The authority before which any such cause is pending shall order the release of the property seized, upon the filling of a sufficient bond to the person making the seizure, with surety, conditioned for the return of said property on demand, if the same shall finally be ordered sold.

SEC. 2. This Act shall take effect from its passage and shall affect all proceedings now pending, except that no person shall thereby be made liable for costs hitherto occasioned, for which he would not otherwise be liable; nor shall any person be thereby deprived of such right, if any, as he may now have to costs or charges already incurred.

SEC. 2403. No person shall take, rake, gather, or collect, by means of dredges or otherwise, any oysters, shells or shell fish in any of the waters of this State, on board of any boat or vessel, for himself or any employer, unless he and his employer are at the time and have been for six months next preceding, actual inhabitants or residents of this State, and any boat or vessel so used, with its tackle, apparel, and furniture, may be seized and proceeded against in the same manner as provided in Section 2400.

SEC. 2404. No person shall use in dredging with any sailing vessel on any of the natural oyster, clam, or mussel beds of this State, any dredge or other contrivance weighing more than thirty pounds, exclusive of the bag or net, but it shall be lawful to dredge shells or shell-fish by steam power upon any private designated grounds by the owner thereof in any of the waters of the State.

SEC. 2405. It shall not be lawful for any person or persons to use a boat or any other contrivance dragged, operated, or propelled by steam in taking up or dredging for oysters, oyster-shells, clams, or other shell-fish in any bay, river, or other waters within the boundaries or jurisdiction of this State; *provided*, however, that this section shall not be so construed as to prevent the use of steam-boats in taking up or dredging for oysters on private designated grounds in any such waters by the owners thereof, or to prevent the use of steam excavators for deepening the water in places where there are no natural oyster or clam beds, or where such beds have not existed within ten years, by digging or removing material, per-

mission to use such excavators being first given by the Board of Commissioners of Shell-Fisheries, which permission shall not be given until after a public notice of at least two weeks of the time and place they will hear all parties desiring to be heard upon such application, which notice shall be posted in the office of the town clerk of the town where such grounds are located.

SEC. 2406. Every person who shall violate any of the provisions of the two preceding sections shall be fined not more than one hundred dollars, or imprisoned not more than six months, or both. Prosecutions under this section may be heard and determined by a justice of the peace, subject to the right of appeal by the accused, as in other criminal cases.

SEC. 2401. When there shall be found on board any boat or vessel, illegally used under the provisions of this chapter, any dredge and shells or shell-fish, in any of the waters of this State, it shall be *prima facie* evidence that said boat or vessel was used contrary to the provisions of this chapter.

SEC. 2402. Every person on board any such boat or vessel, who shall prevent or obstruct any person from entering and seizing it, shall be fined not more than one hundred dollars, or imprisoned not more than six months, or both.

## POLICE.

### PUBLIC ACTS, 1895.

#### CHAPTER CIV.

SECTION 1. The Shell-Fish Commissioners shall appoint and employ five or more persons to act as Oyster Police, who shall detect and prosecute any violations of the Statutes relating to shell-fisheries upon the private oyster grounds in this State. Said Commissioners shall also hire or charter such boats or vessels as may be necessary for the use of such police.

SEC. 2. Such police shall have the same power as deputy sheriffs or constables with reference to such offenses, may seize any boat or vessel which has become liable to seizure under existing Statutes, and do any other acts in enforcement of the Statutes relating to shell-fisheries as may be directed by the Shell-Fish Commissioners.

SEC. 3. The Shell-Fish Commissioners shall pay to such Oyster Police such compensation as said commissioners may deem just

and reasonable, but not exceeding the sum of three dollars per day to each person, and the total expenditure for such compensation shall not, in any one year, exceed one-third the taxes upon oyster grounds paid by the oyster growers to the State in the preceding year.

## MUD DUMPING.

SECTION 2382. The Board of Commissioners of Shell-Fisheries shall appoint one or more suitable persons whose duty it shall be to accompany every boat when it is employed in towing or carrying mud or other material, except that used in making oyster beds, to be dumped out of New Haven Harbor, to see that such mud or other material is properly dumped in the dumping grounds designated by said commissioners, and nowhere else, and to report to said commissioners any violation of law in respect to such dumping; and any person in charge of any such boat, who shall refuse to permit any person appointed as aforesaid to enter and remain upon said boat while it is so employed shall be fined not less than one hundred nor more than five hundred dollars, or imprisoned not less than two nor more than six months; and the boat on which such mud or other material shall be carried without such person appointed by the commissioners as aforesaid shall be liable to seizure, and may be proceeded against in the manner provided in Section 2400.

SEC. 2383. Every person about to engage in removing mud or other material as aforesaid shall notify said commissioners, or some person appointed by them as aforesaid, by a written or printed notice deposited in the post-office of New Haven, postpaid, stating the time when such work will be commenced and the name of the boat or boats to be employed; and any person so engaged who shall not comply with the provisions of this section shall be fined not less than one hundred nor more than five hundred dollars, or imprisoned not less than two nor more than six months.

SEC. 2384. The person so appointed to accompany such boat shall be allowed a sum not exceeding two and one-half dollars per day for such service, to be paid by said commissioners and charged as other expenses of said commission.

SEC. 2385. Whenever it shall be brought to the notice of said commissioners that mud or any other material is being removed from any of the harbors of this State where oyster grounds have

been located or designated, it shall be the duty of said commissioners to locate a dumping ground for such mud or other material, and to appoint a suitable person or persons to accompany every boat when employed in towing or carrying the same under the same limitations and restrictions as imposed by the several preceding sections in reference to New Haven Harbor.

SEC. 2386. Every person who shall willfully deposit or assist in depositing any star-fish or periwinkle in any of the navigable waters of this State shall be fined one hundred dollars.

SEC. 2387. Every person who shall dump mud or other material, except that used in making oyster beds, on any of the grounds of this State located and designated as oyster grounds, shall be fined not more than fifty dollars, or imprisoned not more than six months.

SEC. 2388. No person shall deposit or assist in depositing any substance except oyster shells and other materials used for making oyster beds, in any of the waters of Long Island Sound, within a radius of five miles from Southwest Ledge light-house off New Haven Harbor, or in any of the waters opposite Branford.

SEC. 2389. No person shall deposit or assist in depositing any substance except oyster shells and other materials used for making oyster beds, in any of the waters of Long Island Sound, east of a line drawn due south from Penfield light-house, without the consent of the Board of Commissioners of Shell-Fisheries, who, upon written request of any parties interested, are hereby authorized and required within a reasonable time after such request, to designate and buoy out places off the respective towns on the shore of said Sound, where such deposits shall from time to time be made.

SEC. 2390. No person, during the night season between sunset and sunrise, shall deposit or assist in depositing any substance except oyster shells and other materials used for making oyster beds, in any of the waters mentioned in the preceding section.

SEC. 2391. Any person violating any of the provisions of the three preceding sections shall be fined not less than one hundred nor more than five hundred dollars; and the boat or boats from which materials shall be deposited in violation of said sections shall be liable to seizure, and may be proceeded against in the same manner as provided in Section 2400.

SEC. 2392. The four preceding sections shall not apply to the construction of breakwaters, docks, or any work ordered by the United States government.



## PUBLIC ACTS, 1893.

## CHAPTER CCLXX.

SECTION 1. All persons desiring to dump material on the private oyster beds of the State, from bottom or side dumping scows, shall first make application to the Shell-Fish Commissioners, designating the material and the location where it is proposed to dump the same, and it shall be the duty of said commissioners to notify adjoining owners, that they may protest, if material or place is not suitable.

SEC. 2. Any person violating the provisions of this Act shall be fined not more than fifty nor less than seven dollars for each offense.

## FINES.

SECTION 2397. Every person who shall willfully injure any oyster inclosure legally designated, marked out and inclosed, or remove any buoys or stakes used to mark out any oyster grounds, or who shall take any shells from such enclosure, shall be fined not more than seven dollars, or imprisoned not more than thirty days; on a second conviction, shall be fined not less than seven nor more than twenty dollars, and imprisoned not less than thirty nor more than ninety days, and on every subsequent conviction shall be fined fifty dollars and imprisoned six months; and every prosecution for a first or second offense shall be heard and determined by a justice of the peace with the right of the accused to appeal to the Superior Court as in other criminal causes.

SEC. 2398. Every person who shall injure any enclosure legally designated and marked out, or the oysters planted and cultivated thereon, by willfully depositing mud on the ground so enclosed, shall be fined not less than one hundred nor more than five hundred dollars; and the boat or boats from which mud shall be deposited on such oyster grounds shall be liable to seizure, and may be proceeded against in the same manner as provided in section 2400.

SEC. 2399. Every person who shall between sunset and sunrise take or collect any shells or shell-fish from any place in the waters of New Haven harbor, or its tributaries, or within two miles from the mouth of said harbor, or within two miles from the shore of



East Haven, lawfully designated for the planting or cultivation of oysters, or from any place below high-water mark and within two miles of the shores of Branford, shall be fined not more than one hundred nor less than seven dollars, or imprisoned not more than sixty days, or both; but nothing herein shall apply to the taking of clams off Branford between the first day of May and the fifteenth day of October.

SEC. 2358. Any other person than the owner thereof, who shall, in the day time, unlawfully take and carry away any oysters lawfully planted or cultivated in any waters, or any oysters being on any place duly designated for the planting or cultivation of oysters, shall be fined not more than three hundred dollars, or imprisoned not more than one year; and if such offense shall be committed in the night season, he shall be fined not more than five hundred dollars, or imprisoned not more than one year.

SEC. 2372. No person shall rake, gather, or collect any shells or shell-fish upon any oyster ground designated to any person or persons under the provisions of this chapter, unless said ground has at each corner thereof a bouy or stake visible at high-water, with the name or initials of the owner of said ground plainly marked or painted thereon, or upon a tag attached to the top of such bouy or stake. Every person who shall violate the provisions of this section shall be fined for the first offense not more than seven dollars, or imprisoned not more than thirty days; on a second conviction, shall be fined not less than seven nor more than twenty dollars, and imprisoned not less than thirty nor more than ninety days; and on every subsequent conviction, shall be fined fifty dollars, and imprisoned six months; and every prosecution for a first or second offense shall be heard and determined by a justice of the peace.

SEC. 2373. Every person who shall, between sunset and sunrise, take or collect any shells or shell-fish from any place in the navigable waters in this State, shall be fined not more than one hundred nor less than fifty dollars, or imprisoned not more than sixty days, or both.

SEC. 2360. When oysters have been planted or cultivated on any ground legally designated and recorded for such purpose, and there be any doubt as to which of the adjoining towns has jurisdiction of the same, any offense against the provisions of the statutes relating to fisheries for shell-fish may be prosecuted in either of the three towns nearest to the place where the offense is committed.

## MISCELLANEOUS.

SEC. 2331. The same fees shall be paid for recording or copying papers and maps in the office of the Board of Commissioners of Shell-fisheries as are charged by town clerks for like services; and all fees so paid shall be accounted for and paid to the Treasurer of the State for the benefit of the State; and one of said commissioners, or their clerk, shall have power to sign and issue subpoenas in all matters of inquiry before them.

SEC. 2311. The Board of Commissioners of Shell-fisheries may appoint two or more persons in each town bordering on Long Island Sound to be shell-fish wardens, who shall assist in detecting and prosecuting offenses against the shell fishery laws, shall be paid the same fees allowed to grand jurors in criminal cases, shall have the same powers as other officers to arrest for the violation of said shell-fishery laws, and shall hold office until their respective successors are appointed and qualified.

SEC. 2357. No person except the Board of Commissioners of Shell-fisheries, the authorized committee, or selectmen, shall stake out or inclose any grounds in navigable waters, for the purpose of planting or cultivating oysters therein, unless such person shall own such ground under the provisions of this chapter. Every person violating the provisions of this section shall be fined not more than fifty dollars.

SEC. 2412. The Board of Commissioners of Shell-fisheries are authorized and empowered to hire and take upon leases not exceeding a term of ten years, in the name and behalf of the State, any such plot or plots of ground within the State as they may deem necessary for the constructing, erecting, setting, maintaining, and protecting of signals, beacons, bound-stones, posts, or bouys to be used in designating, locating, surveying, or mapping any shell-fish grounds within State jurisdiction.

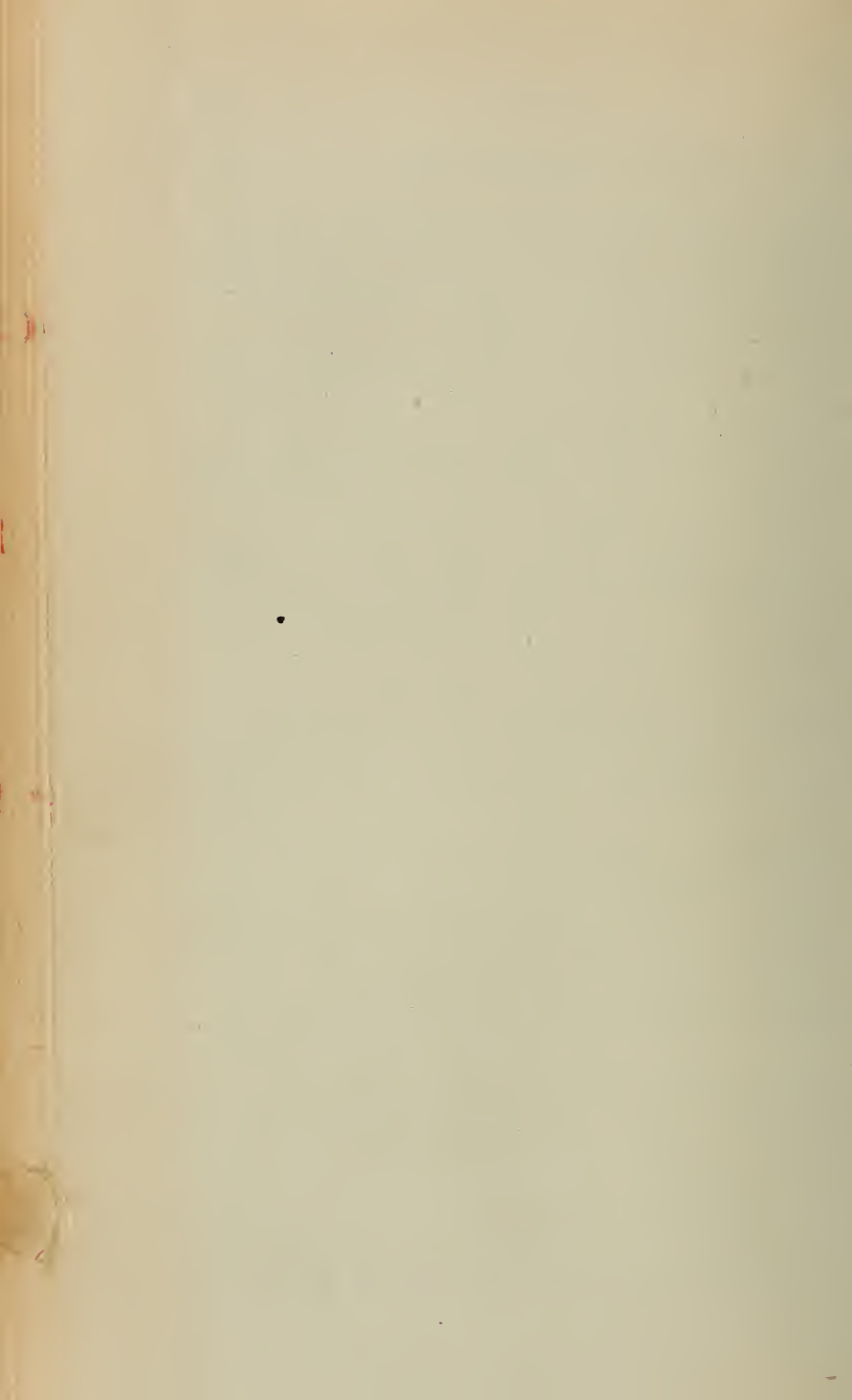
SEC. 2413. Every person who shall willfully injure or remove any signal, beacon, bound-stone, post, or buoy, or any part, appurtenance, or enclosure thereof, which has been or shall be erected, constructed, or set by said commissioners, or by their order, on the land or waters of this State, for the purpose of designating, locating, surveying, or mapping any shell-fish grounds, shall be fined not less than seven nor more than one hundred dollars, or imprisoned not less than ten nor more than ninety days, or both.

SEC. 1170. Executions on judgments against a voluntary association of individuals, associated for the purpose of cultivating, improving, and protecting oysters, may be levied upon any oyster lots or beds owned by any member or members of any such association, after demand made on such owner or owners; and said levy shall be proceeded with in all respects as though said lot or lots, bed or beds. were personal property.

SEC. 1190. Executions may be levied on oyster lots or beds, designated and allotted to any person pursuant to law, in the same manner as upon real estate.

SEC. 602. In the settlement of the estates of deceased persons and insolvent debtors before any court in this State, the interest of any such estate in or to any oyster grounds, or oysters planted and growing thereon, shall be treated as personal estate.

SEC. 3978. In the sale of charcoal, fruits, vegetables, shell-fish, and all other articles sold by heaped measure, one thousand two hundred and eighty-two cubic inches shall constitute a half bushel.



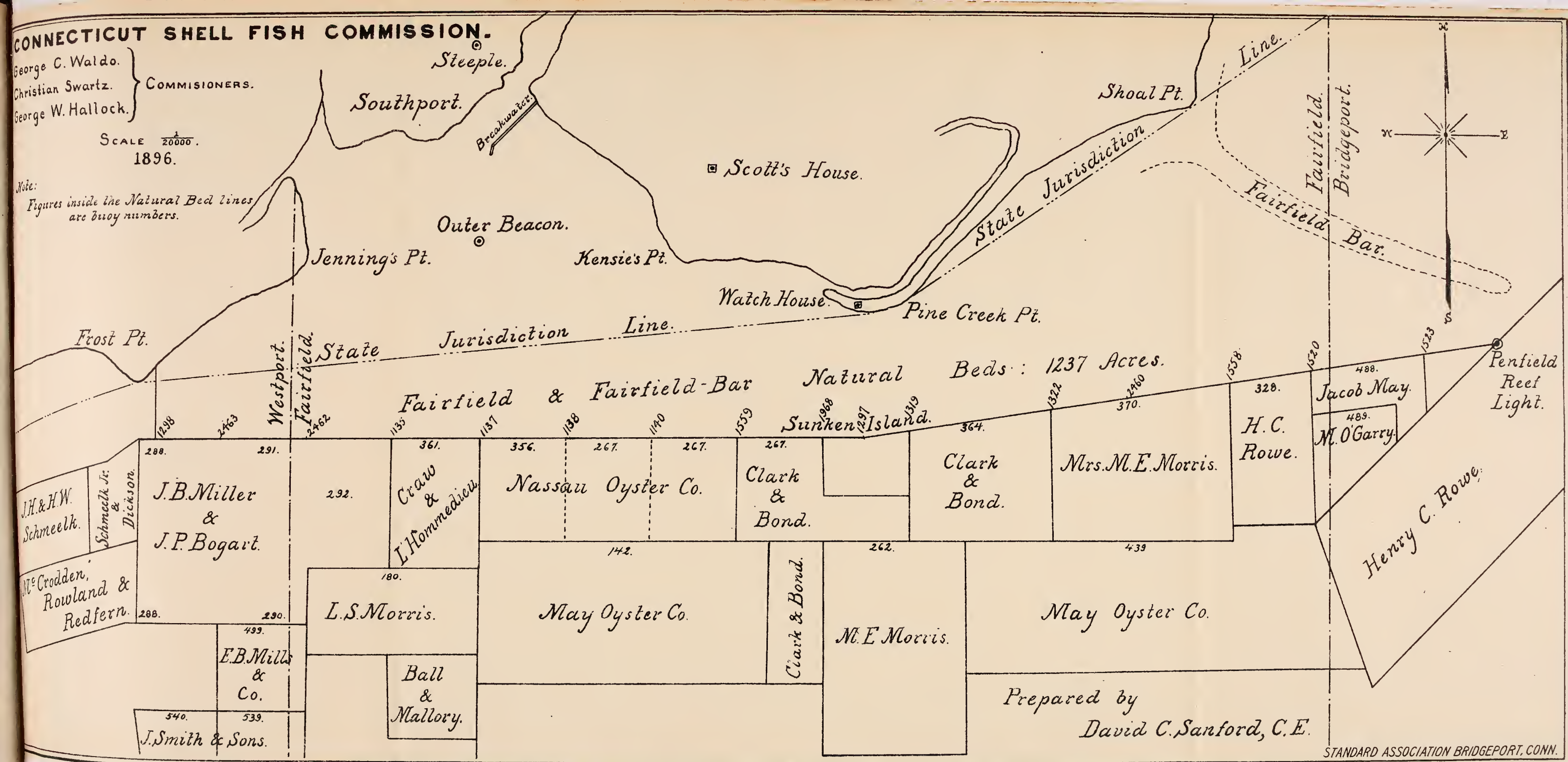


George C. Waldo. }  
Christian Swartz. } COMMISSIONERS.  
George W. Hallock. }

SCALE  $\frac{1}{20000}$ .  
1896.

Note:

Figures inside the Natural Bed lines  
are buoy numbers.



STANDARD ASSOCIATION BRIDGEPORT, CONN.





# NINETEENTH ANNUAL REPORT

OF THE

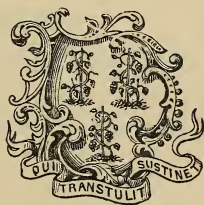
# STATE BOARD OF HEALTH

OF THE

STATE OF CONNECTICUT,

WITH THE

REGISTRATION REPORT FOR 1895 RELATING TO  
BIRTHS, MARRIAGES, DEATHS AND DIVORCES.



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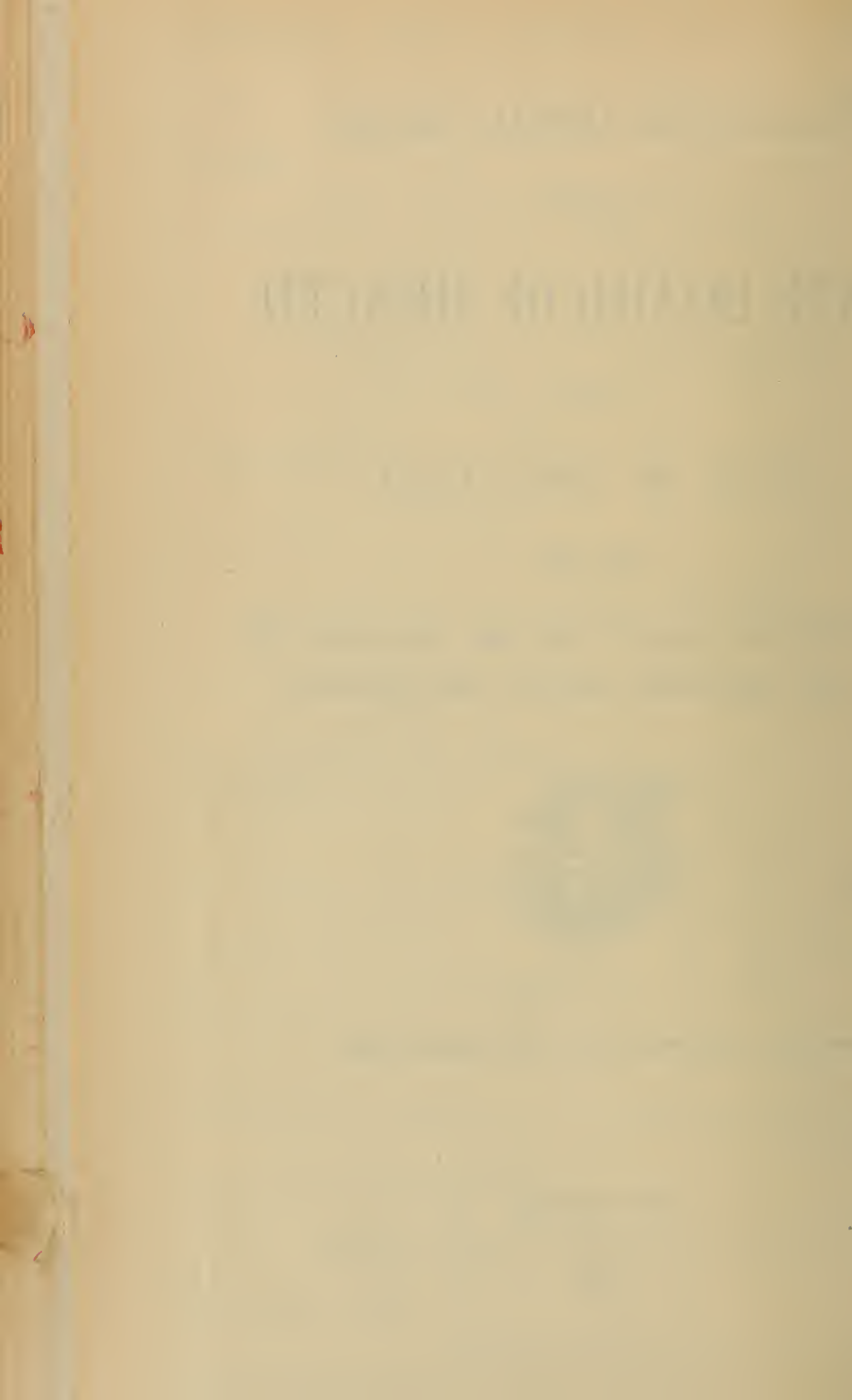
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NEW HAVEN:

THE TUTTLE, MOREHOUSE & TAYLOR PRESS

1897



# State of Connecticut.

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OFFICE OF SECRETARY OF STATE BOARD OF HEALTH, }  
NEW HAVEN, CONN., DEC. 1, 1896. }

*To his Excellency, The Governor of Connecticut :*

SIR : In compliance with the laws of the State, I have the honor to present to you the Nineteenth Report of the State Board of Health ; also the Registration Report of the Bureau of Vital Statistics for the year ending December 31, 1895.

Very Respectfully,

C. A. LINDSLEY, M.D.

*Secretary of State Board of Health and Superintendent of Registration  
of Vital Statistics.*





## MEMBERS OF THE BOARD.

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	Term expires.
Prof. WILLIAM H. BREWER, PH.D., New Haven,	. 1897
GROVE H. WILSON, M.D., Meriden, . . . .	1901
RALPH S. GOODWIN, M.D., Thomaston, . . .	1897
NATHANIEL E. WORDIN, M.D., Bridgeport, . . .	1899
GEORGE P. INGERSOLL, Attorney, New Haven, . . .	1899
THEODORE H. MCKENZIE, Civil Engineer, Southington,	1901
Prof. CHARLES A. LINDSLEY, M.D., Permanent Secretary, New Haven.	

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## OFFICERS OF THE BOARD.

Prof. WM. H. BREWER, President.

Prof. CHARLES A. LINDSLEY, M.D., Secretary and Treasurer.

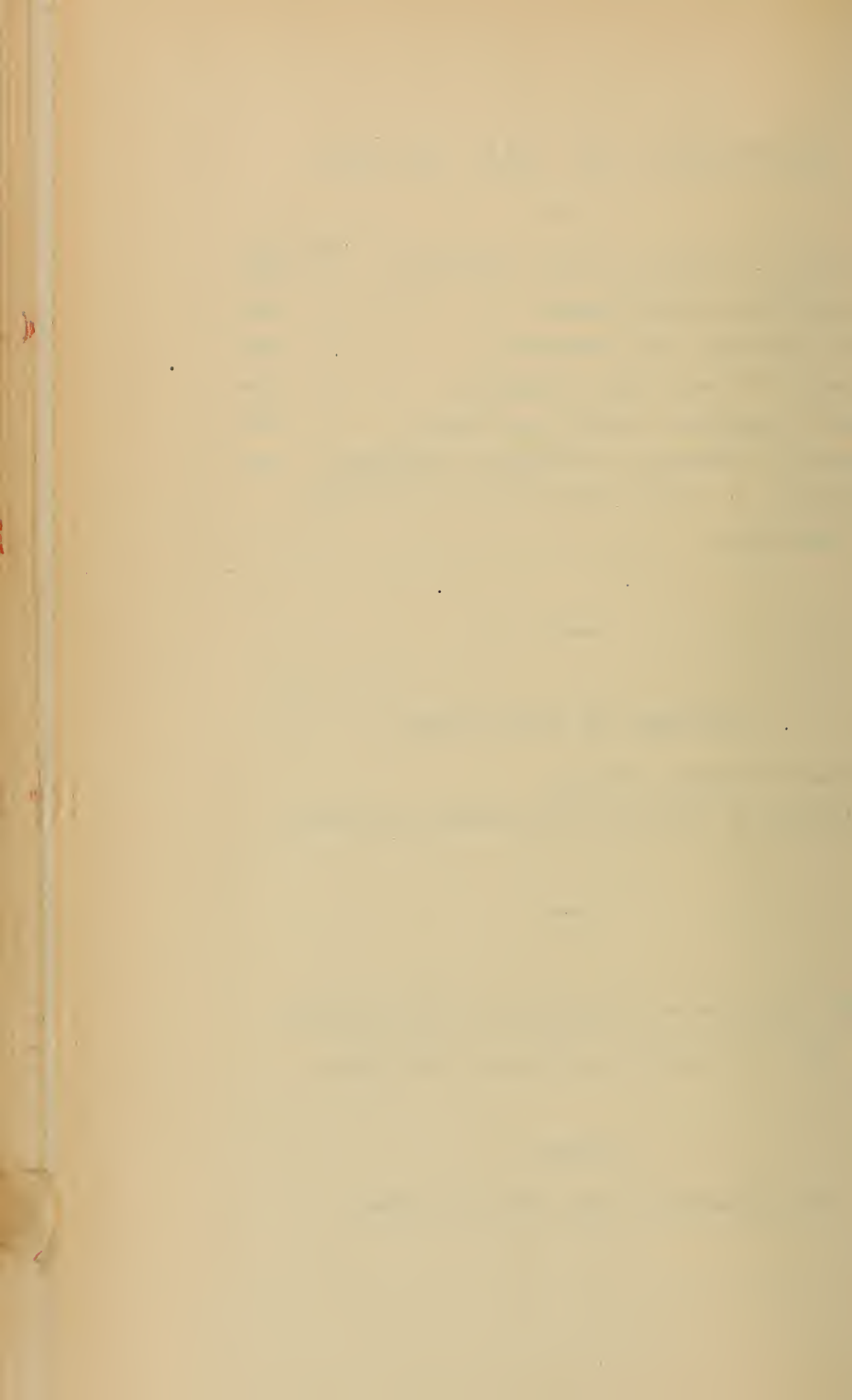
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*State Superintendent of Registration of Vital Statistics.*

Dr. C. A. LINDSLEY, as Secretary of the Board.

*Chemist.*

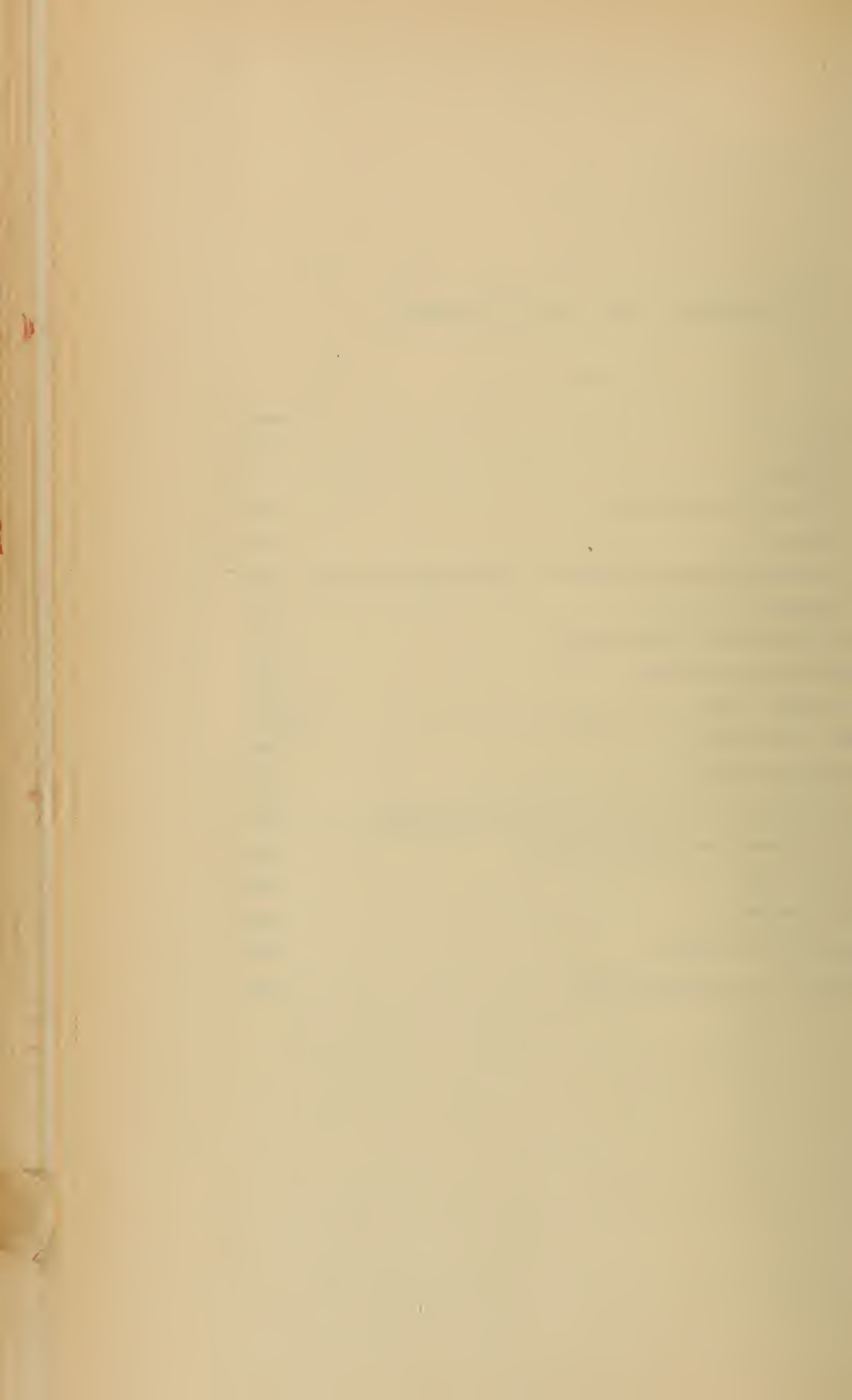
Prof. HERBERT E. SMITH, M.D., New Haven.



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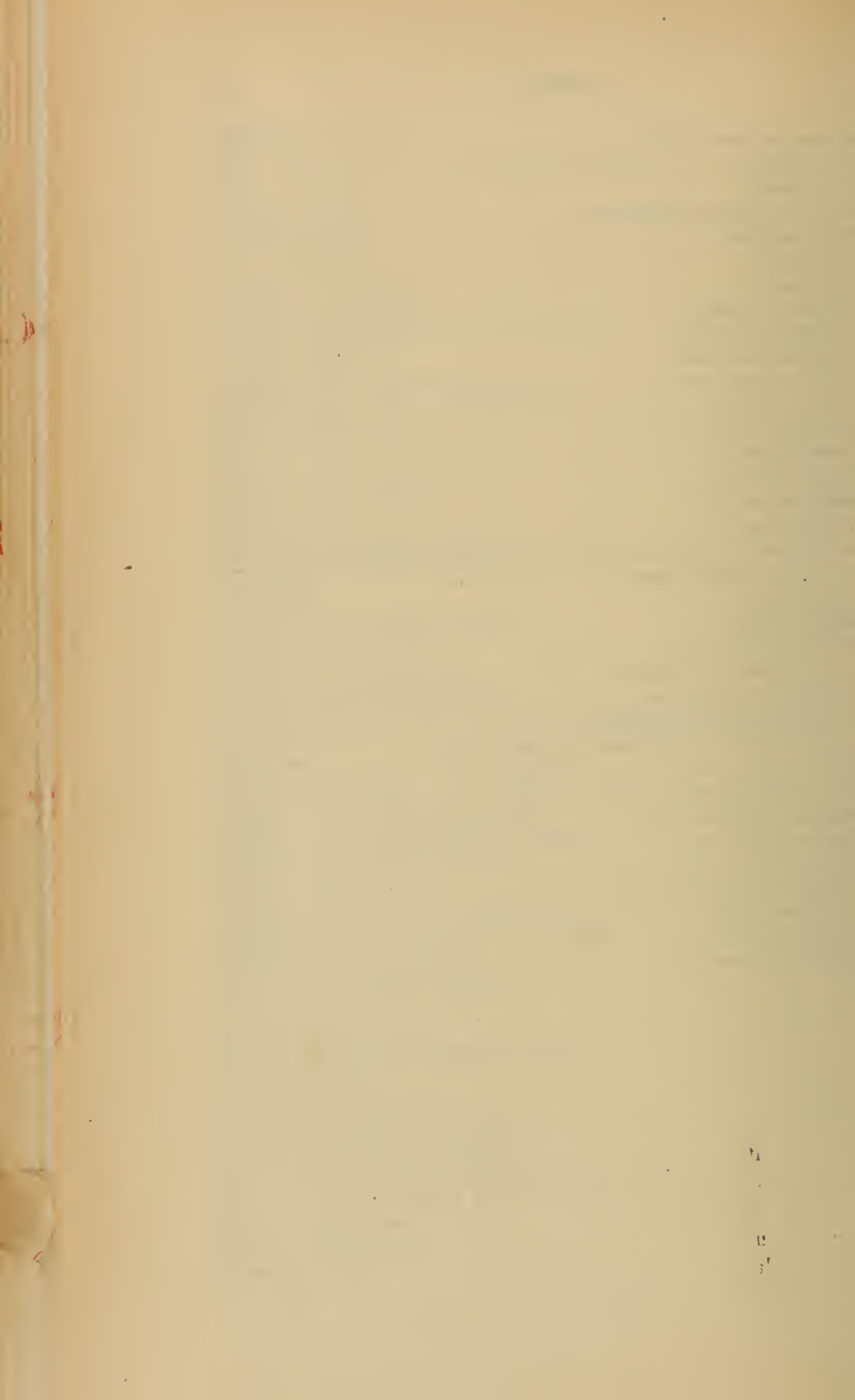
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# GENERAL REPORT.

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*To His Excellency, Governor of Connecticut:*

SIR :—The State Board of Health herewith presents the Nineteenth Annual Report of the Board.

It embraces the following subjects :—

THE SECRETARY'S REPORT.

ANNUAL REPORTS OF THE COUNTY HEALTH OFFICERS.

ABSTRACTS OF THE ANNUAL REPORTS OF THE TOWN HEALTH OFFICERS.

REPORT OF DELEGATE TO NATIONAL CONFERENCE OF STATE BOARDS OF HEALTH.

REPORT OF DELEGATES TO AMERICAN PUBLIC HEALTH ASSOCIATION.

REPORT OF AN EPIDEMIC OF TYPHOID FEVER.

REPORT OF AN OUTBREAK OF TYPHOID FEVER AMONG THE RECENT GUESTS AT SACHEM'S HEAD.

REPORT OF AN INSPECTION OF CAMP COFFIN.

REPORT OF EXAMINATION OF THE WATER SUPPLY AT CAMP COFFIN.

REPORT OF CONTAMINATION OF AN ICE POND IN PLYMOUTH.

REPORT ON THE INFECTIONOUSNESS OF MILK.

REPORT ON THE INVESTIGATION OF RIVERS POLLUTION AND WATER SUPPLIES.

REPORTS ON THE ANALYSES OF SEVERAL WELLS.

LIST OF HEALTH OFFICERS.

LIST OF REGISTERED PHYSICIANS.

DENTAL COMMISSIONERS' ANNUAL REPORT.

## THE PERSONNEL OF THE BOARD.

No changes have occurred since the last report.

Prof. Wm. H. Brewer was elected President.

Dr. C. A. Lindsley was elected Treasurer.

Prof. Wm. H. Brewer and Geo. P. Ingersoll were elected Auditing Committee.

The Board have held the regular quarterly meetings as required by law, and three special meetings.

In several of the meetings the full Board has been present. No meeting has failed for want of a quorum.

THE HEALTH OF THE STATE FOR THE YEAR ENDING  
AUGUST 31ST, 1896.

The facts which appear in the Annual Reports of the local health officers throughout the State, justify the belief that for many years there has not been such a general prevalence of epidemic diseases as during the two years ending August 31st, 1896.

Measles began to be prevalent in some parts of the State more than a year ago, and during the past year has invaded almost every part. Of the 168 towns in the State, it is reported as occurring in 134 of them. Scarlet fever has also been very prevalent in both years, but less so in the last year than in the previous one. There were 88 towns entertaining it during the last year, against 103 in the previous year.

Typhoid fever, too, has diminished somewhat in the number of towns in which it has occurred, and probably more, proportionally, in the number of patients afflicted.

Connecticut has not suffered any such severe epidemics of it in 1896 as afflicted Stamford, New Milford and Danbury in 1895.

Only one of any severity is reported in 1896, and that was limited almost to a single ward in the city of New Haven.

Its origin was satisfactorily traced to infected milk, dispensed by a single dealer. A report of it will be found in this volume, on page 261.

Diphtheria and membranous croup have increased in prevalence in the last year; so, too, has whooping cough, the former appearing in 81 towns, and the latter in 60. In several towns in the northeasterly portion of the State, malarial disorders are reported as being more prevalent than for several years before.

Yet, notwithstanding the wide-spread prevalence of these very fatal maladies, the total mortality in the State was not much greater than the average of the previous years. Indeed, the death rate was not increased, and the total mortality only in proportion to the increased population.

EFFICIENCY OF HEALTH OFFICERS.

Again, notwithstanding the above named diseases are epidemic in character, it is remarkable how few epidemics have occurred. No stronger evidence of the vigilance and efficiency of the local health officers can be presented than the fact so often stated in



their annual reports. No "secondary cases occurred in consequence of the primary case." Or, "The disease did not extend beyond the family in which it first appeared."

Thus by prompt attention and due precautionary measures, the outbreaks were restricted to the first place of their appearance, epidemics were prevented, many lives saved, and an unlimited amount of suffering and anxiety anticipated and averted.

Another interesting fact in this connection is, that the diseases above mentioned are all of them diseases of the preventable class, although, with the exception of typhoid fever, not owing their origin to insalubrious surroundings in any great degree. They are preventable, in the sense that they are perfectly controlable in respect to their further prevalence, by means of isolation and disinfection. It is very much in evidence that the health officers of the smaller towns have been during the past year vigilant and active in the application of those measures which have proved effective preventives of the spread of contagion, and, as compared with the city officials, have been more successful.

This result may not be altogether due to more faithful attention to duty, but is, in part, because of the greater difficulty in applying effectively the means of restricting contagious maladies in the denser and more mixed population of large communities. The large school-houses of cities, in which several hundreds of children are daily assembled in promiscuous intimacy, give an opportunity for the widespread dissemination of contagion before there is any indication of its presence. Another source of danger is the daily influx of visitors into cities, many of whom may carry infection and plant it in numerous places, in spite of the utmost vigilance of health officers.

It is not an uncommon event for an individual, in the incipient or in the convalescent stage of a contagious disease, to communicate the same to many other persons, in a crowded store, at a public meeting, in a place of public amusement, or in a railway train, which disease may appear in widely separated parts of a city without affording the slightest clue to its origin. Still another reason for the more frequent occurrence of epidemics in cities is because of the unwise parsimony so often observed in cities in the stingy appropriations for public sanitation.

Too often they are altogether inadequate for any satisfactory administration of public hygiene.

There has been only one case of small-pox in the State in the

year. That appeared in Middletown, and the only probable cause of its origin, that was discovered, was the reception of letters from a southern city in which small-pox was prevalent ; a mode of transmission which has before proved possible.

The patient was so promptly and judiciously cared for that no subsequent cases followed.

#### THE ANNUAL REPORTS.

It is deserving of mention that a larger number of annual reports have been received from town health officers than ever before. From the 168 towns in the State, the health officers of 156 have made the annual report as required by law.

There are 18 cities and 20 boroughs. The law does not exact from these an annual report to the State Board ; but, upon request, 11 cities and 7 boroughs have made such reports. In this respect the cities have done better than last year, but the boroughs not quite so well.

What is of more importance than the mere number of reports is the very general testimony they bear to the growing sentiment on the part of the public in favor of town sanitation. The reports show, also, a more correct appreciation of the responsibilities of health officers and the attainment of a higher standard of duty than ever before was reached. There is less opposition than formerly to the abatement of ordinary nuisances. Through the instruction which the county officers have given to the town health officers, the latter can proceed in the discharge of their duty with confidence and the assurance that they are acting legally. The citizens also have not been slow to understand the situation and generally acquiesce cheerfully in the orders of town health officers. In only a very few instances have appeals been taken from their orders.

#### THE MILK SUPPLY.

The three serious epidemics of typhoid fever which afflicted the State in the previous year, two of which were caused by infected milk, and still another the present year in New Haven, have drawn earnest attention to the question of milk supply, and there is evidently a strong feeling that some systematic efforts should be made to insure a safer product for public consumption. Some legislation will be needed to accomplish anything effectual and satisfactory.

Epidemics of typhoid fever, scarlet fever and diphtheria, of which many have been traced to milk distribution, are due to specific infections of the milk. These are accidental, or because of ignorance or carelessness on the part of the dealers and producers, and never intentional contaminations.

The following communication, which is only one of many that might be offered, illustrates a source of danger from milk caused by *intentional* interference with natural milk by the dealers in it, to increase the profits of their sales, and at a fearful sacrifice of infantile life :

H. A. Pooler, M.D., of Goshen, N. Y., in a letter to J. Chester Morris, M.D., of Philadelphia, says :—"The amount of milk fluid used in New York City, Jersey City and Brooklyn, in 1882, was about 500,000 quarts per day, made up of 300,000 quarts of pure milk, 80,000 quarts of skimmed milk, and 120,000 quarts of water. The 200,000 quarts of adulteration, by water and skimmed milk, so reduced the nutriment as to produce an increase in the mortality of children to a fearful extent. The amount of adulteration was reduced from 200,000 to 100,000 quarts per day by the persistent efforts of the board of health, aided by the facility the railroads gave them by allowing them to inspect the milk in transit on the trains to the city, which has had a very happy effect by reducing the death rate of children in the city of New York alone, under five years of age, 3,673 less in 1883 than in 1882, other conditions of the city being about the same. We found the adulteration was done by the middlemen through whose hands the milk passed."—A. P. H. A. Assoc., Vol. x, p. 250.

Numerous other facts might be presented in evidence that infected and adulterated milk is one of the most fruitful sources of disease and death to which the human family is exposed. There is scarcely any subject connected with our social life that more imperatively demands earnest consideration and judicious regulation than the milk traffic. In this connection, it is well to direct attention to an article on page 272 of this Report, on the "Infectiousness of Milk," by the accomplished Secretary of the State Board of Health of Iowa, Dr. J. F. Kennedy. It is such an excellent summary of the subject, that the consent of Dr. Kennedy has been obtained for publication in this report.

#### SEWAGE DISPOSAL.

It is also noticeable in many of the reports that the subject of sewage disposal is engaging the attention of the larger communities.

The city of Meriden has provided a very satisfactory method of disposal by intermittent filtration on a tract of land admirably adapted to the purpose and located about one and one-half miles outside the city limits. The works were designed by T. H. McKenzie, C.E. There are 14 filter-beds, upon which the sewage is admitted by several inlets to each bed. These beds are used in succession, two for each day, and all deposit cleaned from the beds after each dose of sewage. The effluent is exceptionally free from impurities.

The borough of Bristol has recently completed a similar work after plans prepared by T. H. McKenzie, C.E. The disposal is by intermittent filtration through soil. The area of land selected is in every way suited to the purpose. The works have been in operation for about one year. During the first few months in which the beds were operated, they were not properly cared for. The doses were too large and the intervals between doses too long. The works are now receiving more attention and the results are more satisfactory. Although this method of disposal is the cheapest which can be adopted, yet the works will not care for themselves automatically. Cheap labor and proper supervision are all that are required.

Waterbury is also struggling with the question of what to do with its sewage. Under the direction of some of the best sanitary engineers in the country, it is to be hoped the problem will soon be satisfactorily solved.

Danbury has purchased an extensive field, and is preparing a portion of it, under skilled direction, for land disposal of its sewage by intermittent filtration.

#### SANITARY PLUMBING.

The proper plumbing of dwelling-houses and public buildings is a matter very intimately connected with public health. As a factor among the many artificial conditions which surround us in our homes, the subject of good plumbing, as it affects the well-being of ourselves and our neighbors, has not received the public attention which its importance demands.

The difference between a house in which the water-pipes and the drain-pipes are properly laid and a house in which the plumbing is defective, is the difference to the inmates between breathing a good, wholesome air and an atmosphere vitiated with the gases generated in the putrifying corruptions of sewage.



The inflow of poisoned air through the metallic arteries which so closely connect our houses with the filth deposits in the sewers and still viler cesspools, may not be laden with any germs of specific disease, but it is always charged with depressing influences hostile to a high standard of health, and invariably lowers the vital powers of those who are obliged to live in it and inhale it. The inconveniences which our grandmothers endured in being obliged to go out of doors to the well for a pail of water, and to carry out the house-slops in hand-buckets, were not without their compensations. The old ladies (they were young then) got a bit of fresh air many times in the day when out of doors, and a much purer air when indoors, than most of us have in these days of so-called modern improvements.

Among the many perils that beset the lives of those who live in hired houses, there are few that are more dangerous than bad plumbing. Pure air is one of the fundamental essentials of good health. Pure air, in a house with defective plumbing, is impossible.

With each returning year, new enterprises are reported among the more intelligent communities of the State in relation to public water supplies, the laying out of public parks, the construction of new sewer systems or the extension of old ones, and the practice of more systematic methods of sanitary inspection.

It is upon the foregoing lines of action that the future progress in public hygiene in Connecticut is to be made. The great strides which have been taken in medical science in the last few years, in the direction of preventing disease, are being realized by the people, and they are coming to appreciate in a more practical way than ever before the old adage, that "Prevention is better than cure."

During the past year the health officers of almost every town report that they have inspected the school-houses and other public buildings within their jurisdiction. Although they do not always "point with pride" to their sanitary condition, yet many of them claim that they are improved as compared with the previous year. The unsanitary feature most frequently mentioned is the filthy state of the out-houses at the schools, and next to that is defective ventilation in the old country school-houses.

It is, however, reported that school committees very generally acquiesce in the suggestions of the health officer and promise reformatory proceedings.



The general tenor of the reports of the town health officers for the last two years indicate unmistakably that greater progress has been made in that time than in the previous decade.

The following gentlemen represent the State Board of Health on the Boards of Managers in the several County Temporary Homes for Dependent and Neglected Children.

Hartford County,	.	.	Dr. C. A. Lindsley, New Haven.
New Haven	"	.	Prof. W. H. Brewer, New Haven.
New London	"	.	Dr. G. H. Wilson, Meriden.
Fairfield	"	.	Dr. N. E. Wordin, Bridgeport.
Windham	"	.	Geo. P. Ingersoll, Esq., New Haven.
Litchfield	"	.	Dr. R. S. Goodwin, Thomaston.
Middlesex	"	.	Dr. G. H. Wilson, Meriden.
Tolland	"	.	T. H. McKenzie, C.E., Southington.

## MEETINGS OF THE BOARD.

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### SPECIAL MEETING.

Oct. 28, 1896.

A special notice was sent to the Board (in conformity with a vote at the last quarterly meeting) to convene in Meriden on the 28th of October, to visit and inspect the operation of the filter beds prepared for the reception of the sewage of Meriden.

The following members of the Board met at the Meriden depot on the arrival of the 1.05 P. M. train from New Haven: Prof. Brewer, Dr. Wilson, Dr. Wordin, Mr. McKenzie and Dr. Lindsley. No organization of the Board was formed, but escorted by the Mayor of Meriden, the Superintendent and the Engineer of the sewer works, and by the Health Officer of Meriden, the members proceeded in carriages to the filter beds, a mile or two from the city.

They were found to be working very satisfactorily. The methods of employing them in regular succession and caring for them was duly explained by the engineer of the works.

It was a demonstration, in the opinion of the Board, that with proper superintendence and the employment of inexpensive labor the sewage of the city of Meriden can be satisfactorily disposed of.

After the inspection the members returned to their homes without taking any formal action.

### SPECIAL MEETING.

NEW HAVEN, CONN., Dec. 4, 1895.

A special meeting of the State Board of Health was held this day at the office of the Secretary. The members were called to order at 2.25 P. M., President Brewer in the chair. There were present Dr. Wilson, Dr. Wordin, T. H. McKenzie, C.E., and Dr. Lindsley.

The special business for which the meeting was called was to consider and act upon a report on the pollution of Greenwood's ice pond, by the sewage of Winsted. Also to act upon a proposed circular upon typhoid fever, its prevention and restriction, and to consider any other business proper to be transacted at such meeting.

The report on the Winsted sewage, etc., was received, amended and adopted. And the Secretary was instructed by vote to send a copy of it to the health officer of New Hartford, the health officer of Winsted, the county health officer of Litchfield county, and the Greenwoods Manufacturing Company.

The Secretary stated that the Board had received 100 copies of a "Summary of the Vital Statistics of the New England States," and it being a valuable contribution to statistical literature, he moved that an additional hundred copies be procured by purchase for distribution. It was so voted.

On motion it was voted : That 5,000 copies of the circular on Prevention and Restriction of Typhoid Fever be published.

No other business offering, the meeting adjourned.

Attest : C. A. LINDSLEY, *Secretary*.

### QUARTERLY MEETING.

NEW HAVEN, CONN., Jan. 23, 1896.

The quarterly meeting of the State Board of Health having been duly warned, was held this day at the office of the Secretary in New Haven.

The meeting was called to order at 2.40 P. M. by the Secretary. The President being absent, on nomination Dr. Wilson was elected President *pro tem*. There were present Dr. R. S. Goodwin, Dr. N. E. Wordin, T. H. McKenzie, C.E., G. P. Ingersoll, Esq., and Dr. C. A. Lindsley.

The minutes of the last two meetings were read and approved.

There were also present as parties interested in matters to be considered by the Board, Mr. R. R. Smith of the Greenwoods Manufacturing Co., Judge Lynde Harrison, Mr. T. H. Arnold of Hartford, and County Health Officers Markham of Hartford, Hill of Bridgeport, and Hoadley of New Haven. At this point, President Brewer, having arrived, assumed the chair.

On account of the presence of so many persons whose time was valuable, the usual order of business was by vote suspended, and the report on Greenwoods Pond as an ice supply, made at the last meeting of the Board, was called up for consideration.

On motion, the report was read by the Secretary.

Judge Harrison called in question the authority of the county health officers to prohibit the sale of ice from that source, in the absence of direct and positive proof that said ice had been a cause of sickness. He suggested that the State Board of Health should cause specimens of the ice to be examined in the most thorough manner, and the sale of ice from the said pond depend upon the results of such examination.

To this it was objected that such examination would probably not be conclusive. The probability of finding disease germs in the portions examined would be exceedingly remote, because they are not in such abundance as to be generally distributed throughout the ice, and the negative results from a few examinations would not disprove their presence in other portions.

The magnitude of the interests involved in the ice business at this place was fully stated, and also the disposition and earnest desire of the parties concerned in the business to do everything possible to protect the purity of the ice.

Nearly all the gentlemen present participated in the discussion, which was quite free and informal, and involved both questions of law and sanitation.

On motion of Mr. Ingersoll it was

*Voted*, That no further advisory action, if any, in the matter of the Greenwoods ice supply be taken by the State Board of Health within twenty days, and within that time the Greenwoods Ice Company be permitted to submit to the State Board of Health such information and evidence relating to the matter of the Greenwoods ice pond as they may desire.

The Board then proceeded to the consideration of a communication from the Health Officer of Middletown, requesting the approval of the State Board of a form of notice to be given to families in which occur contagious diseases.

The time having arrived when the departing trains and other engagements of members obliged an adjournment, the Board adjourned to meet again at the same place, on Saturday, Feb. 8, at 2.30 P. M.

Attest :

C. A. LINDSLEY, *Secretary*.

## ADJOURNED MEETING.

NEW HAVEN, CONN., Feb. 8th, 1896.

The adjourned meeting was held this day at the office of the Secretary at New Haven.

The meeting was called to order at 2.35 p. m. by the President, Prof. Wm. H. Brewer. There were present Dr. N. E. Wordin, T. H. McKenzie, C.E., G. P. Ingersoll, Esq., and Dr. Lindsley. There were also present, as parties interested in the business before the meeting, Mr. R. R. Smith, of the Greenwoods Ice Company, and his counsel, and the County Health Officers of Hartford and New Haven Counties.

The minutes of the last meeting were read and approved.

On motion of the Secretary, the order of business was suspended in order to bring forward without delay the special business of the meeting.

Mr. Lynde Harrison presented a letter from Dr. Bartlett stating the result of a bacteriological examination of a specimen of ice taken from Greenwoods Pond.

Mr. R. R. Smith, being sworn, stated that he had visited Winsted, and had interviewed many citizens, from whom he had learned that the prosperous portion of the people were already in favor of constructing a system of sewerage for the borough, but that those of lesser means were not willing to incur the expense.

He further testified that in his judgment any attempt by litigation, to compel the citizens of Winsted to provide a different mode of sewage disposal, would arouse so much opposition that it would delay rather than hasten such a result.

He further testified that the most diligent inquiry had failed to discover that there had been more than one case of typhoid fever in the borough during the past season, and that in the care of that case every possible precaution had been taken to destroy the infection.

Dr. Bartlett was sworn, and testified that he had selected the sample of ice, and described the bacteriological examination of it, and the result as communicated in his letter to Mr. Smith.

The testimony being all given, on motion of Mr. Ingersoll the Board went into executive session.

After careful deliberation the Board expressed its judgment in the following preamble and resolutions :



*To whom it may concern :—*

This certifies, that at an adjourned meeting of the State Board of Health, held February 8th, 1896, the following action was taken by a unanimous vote.

*Whereas*, The parties concerned in the Greenwoods ice supply have presented evidence to the Board that not more than one case of typhoid fever had occurred in Winsted during the time of possible contamination of this winter's ice, and, that that case had been cared for in the way of disinfecting the dejections and clothing of the patient with the most scrupulous attention. And

*Whereas*, A bacteriological examination of a sample of the ice taken directly from the Greenwoods Pond has been made since our last meeting and found to be of exceptional purity (12.5 bacteria to the cubic centimeter). Therefore be it

*Resolved*, That after hearing the parties interested in the Greenwoods Ice Company, and having considered the evidence by them submitted as to the character of the ice supply, the State Board of Health is still of the opinion that water exposed to such sources of pollution might be under certain circumstances, which frequently occur, a medium of danger to the consumers of ice; but this Board in view of the additional facts and analysis submitted since its last meeting, is of the opinion that at the present time the danger to be feared is not of sufficient magnitude to demand advisory action by the Board to prevent the sale of this winter's ice supply from Greenwoods Pond.

*Resolved*, That this action of the Board is not to be taken as an approval, in any degree, of the use of any future crops of ice from Greenwoods Pond, while subject to such dangerous exposure.

The regular business of the meeting was then resumed. The report of the Treasurer was read, approved and ordered on file.

A communication from the N. E. Weather Service was read, and on motion of Dr. Wordin it was voted that \$25.00 be subscribed for its publication for the ensuing year.

Other communications were presented by the Secretary, and were given respectful and attentive consideration.

The report of the Secretary for the last quarter was read and ordered on file.

No other business offering, the meeting adjourned.

C. A. LINDSLEY, *Secretary*.

## SECRETARY'S REPORT

*For the Quarter ending December 31st, 1895.*

## THE HEALTH OF THE STATE.

There were 3307 deaths in Connecticut during the last quarter of the year. This was 575 less than in the previous quarter, and 56 more than the average of the corresponding quarter of the previous 5 years.

It was equivalent to an annual death rate of 16.2 to every 1000 of the living population.

## ZYMOTIC DISEASES.

The 3307 deaths included

4 attributed to measles.		
113	"	" diphtheria.
210	"	" diarrhœa.
22	"	" whooping cough.
176	"	" fevers.
11	"	" scarlet fever.
<hr/>		
536		

This is equivalent to an annual death rate from the usual zymotic diseases of 2.6 per 1000 of the living population.

It is a little more than the average death rate in England from the same diseases in the corresponding quarters of the previous ten years. It is more than double the death-rate for the corresponding quarter of the previous year, both in England and Ireland.

There was a smaller mortality from scarlet fever in the last quarter than in any corresponding quarter in the previous five years.

The same is true of diphtheria and croup.

Typhoid and other forms of fever was fatal in nearly the average number of cases in the corresponding quarter for the past six years.

But the mortality from diarrhœa has markedly increased.

Taking the total of deaths from the whole class, and compar-

ing it with the average totals in the same quarter for six years, and there has been practically no gain.

The average number of deaths from these diseases in the last three months of each year for the six years was 537 $\frac{5}{8}$ .

The total number of deaths from the same diseases for the quarter ending Dec. 31st, 1895, was 536. The most that can be said is, no loss from an increasing population.

When it is conceded that the foregoing diseases are for the most part in the list of those called "preventable," it must be confessed that the measure of success in preventing them is not so great as to excite enthusiastic commendation.

There are superficial critics who affect a sense of disappointment because the somewhat considerable machinery of state and town health boards and health officials have not accomplished a positive reduction of the death-rate from preventable diseases.

But if they have not realized all that was expected in positive and direct results, they have at least demonstrated the methods by which the death-rate from these disorders can be lowered in a marked degree.

It is admitted on both sides that these diseases are contagious or infectious, and it is equally well known that the spread of them can be wholly prevented by isolation and disinfection. By the same token their prevalence cannot be prevented in a community if isolation and disinfection are disregarded.

It follows as the day follows night, that boards of health will fail in their efforts in this direction so long as the means of isolation and disinfection are wanting. There are no substitutes for them.

In the absence of isolation hospitals and disinfection establishments, it becomes necessary to isolate and disinfect in private houses. Inasmuch as this is possible in most private houses to only a limited extent, the control of contagious and infectious diseases must also be very limited. The laws of nature are absolute and unalterable, they make no account of our difficulty in complying with them. If our private houses are so contrived that we cannot isolate a patient in them, and if we do not possess the appliances for disinfection of infected things, Nature makes no exception in her proceedings on that account, but spreads the contagion and infection about, just as if we did not know there were such laws.

Now, it would be just as rational to expect any great lessening

of sickness and death through the exertions of health officers without enabling them to apply the known means of diminishing them, as it would be to attempt to put down crime, by merely appointing experts to investigate the career of criminals and write interesting and exciting epistles to magistrates and judges who had no police or dungeons behind them to control the criminals.

It has been found impossible to restrict epidemics by moral suasion.

When it comes to pass that communities will accept the practical fact that it is only by means of isolation and disinfection that they can secure themselves against epidemics of contagious and infectious diseases, they will then erect isolation hospitals and provide disinfecting appliances, and in that way make effective the instrumentality of health boards and health officers.

Outbreaks of diphtheria have occurred in three of the County Temporary Homes. That in the Haddam Home was a continuance of the epidemic of the previous quarter. In the Fairfield County Home there were several cases, and in the Hartford County Home three cases were imported from New Britain, where a quite severe and extensive epidemic prevailed.

Scarlet fever has been prevalent quite generally through the State, but the type of the disease was mild and few deaths, in proportion to the sick, have occurred.

Typhoid fever has also prevailed as widely as ever.

But the general health of the State during the quarter has maintained an average standard with previous corresponding quarters.

#### VISITS AND INSPECTIONS BY THE SECRETARY.

Oct. 9th. An ice pond at Hartford.

Oct. 15th. The "Temporary Home" at Warehouse Point.

Oct. 25th. Meeting of Managers of Temporary Home.

Oct. 30th. Addressed the Town Health Officers of Tolland County at Rockville.

Nov. 3d. Conference with Health Officer of Hamden at Centerville: the outbreak of diphtheria.

Nov. 16th. Inspection of the disposal of sewage at the Borough of Winsted.

At the inspection of the ice pond at Hartford and of the sewage disposal at Winsted the Secretary was accompanied by Mr. McKenzie.



There have been a number of requests for analyses of well waters, some of which I have directed Prof. Smith to make at the expense of the Board. In other cases the charge has been paid by the parties asking for the examinations.

### QUARTERLY MEETING.

NEW HAVEN, CONN., May 9th, 1896.

Quarterly meeting held this day, at the office of the Secretary at New Haven.

The meeting was called to order at 2.30 P. M., President Brewer presiding. There were present, Dr. G. H. Wilson, Dr. N. E. Wordin, T. H. McKenzie, C.E., and Dr. C. A. Lindsley.

The minutes of the last meeting were read and approved.

The report of the Treasurer was read and ordered on file.

A communication from Dr. Chamberlain, Health Officer of Cheshire, relating to the prevalence of small-pox in Gloucester, England, was fully considered, and on motion laid upon the table.

A communication from the State Board of Health of Michigan, relating to the spread of tuberculosis by milk and the means of prevention, was presented by the Secretary, and after discussion it was voted :

That a committee consisting of the President and two others, to be appointed by the President, shall consider this subject and report what action this Board should take upon it.

The President appointed Dr. Lindsley and Dr. Wordin on the committee.

The Secretary stated that he had received notice that the next National Conference of State Boards of Health will be held at Chicago, on June 10th, 1896.

On motion of Dr. Wordin, it was voted that the Secretary be appointed a delegate to the Conference, with power to appoint another delegate and a substitute for himself, if unable to attend.

A communication from a member of the Congressional Committee on Agriculture, Hon. D. F. Wilbur, was read by the Secretary relating to "filled cheese." The subject was discussed. But as it did not appear to be within the functions of the State Board of Health to take official action on the chief feature of the communication, viz: its relations to commerce, it was laid upon the table by unanimous vote.

Mr. C. E. Hoadley, County Health Officer of New Haven



County, being present, asked the advice of the Board as to his duty in the case of Dr. James D. McGaughey of Wallingford, who had persistently neglected to return his certificates of birth oftener than once in six months, notwithstanding repeated requests for monthly reports, as required by law.

In considering the matter, the Board thought the action of the county officer would involve the whole question, whether the law should be enforced or not. If not enforced in this instance, there would be no better reason for enforcing it in any other, and therefore voted that Mr. Hoadley be advised to prosecute Dr. McG. for at least one of the many violations of the law which he had committed, and that he be made to pay the penalty, but that in view of his promise not to offend again, the other complaints be withdrawn.

The decision of the Supreme Court, sustaining the verdict in favor of the plaintiff in the matter of sewage pollution of Still River at Danbury, was by request presented to the attention of the Board, because it is in many respects parallel to the conditions existing in regard to the pollution of Mad River at Winsted.

It was *voted*: That the Greenwoods Ice Company are at liberty to publish the report of the Board respecting the pollution of Mad River and Greenwoods Lake, and any other action which the Board has taken in the matter.

The report of the Secretary was read and ordered on file.

No further business offering, the meeting adjourned.

Attest,

C. A. LINDSLEY, *Secretary*.

## SECRETARY'S REPORT

*For Quarter ending March 31st, 1896.*

### HEALTH OF THE STATE.

The health of the State, as estimated from the mortality reports of registrars, appears to have been markedly better than in the corresponding quarter of last year. The total deaths for the three months ending March 31st, 1896, was 3503, while in the same months of 1895 it was 3803, a difference of just 300 in the two corresponding quarters.

As regards some of the more prominent diseases, the comparison when tabulated is :

	1896.	1895.
Measles .....	45	5
Scarlet Fever .....	23	13
Diphtheria .....	114	92
Whooping Cough...	7	46
Typhoid Fever .....	34	36
Consumption .....	370	404
Pneumonia .....	507	618
	<hr/> 1100	<hr/> 1214

I am greatly pleased to be able to report a great improvement in the prompt information rendered to this office every month by the town health officers of the cases of contagious diseases occurring in their respective towns.

In New Haven County every town health officer has reported each month.

In Hartford County from one to four health officers have failed each month.

In New London County, reports for the last two months have been almost complete.

In Fairfield County only two failures in the three months.

In Windham County one to four failures each month.

In Litchfield County twenty town health officers have been negligent in one or more months, and the same number in Middlesex County.

In Tolland County only one failure in the three months.

The reports of cases by the health officers, and the mortality reports by the registrars, supply the facts necessary to compute the percentage of deaths from each disease reported.

It is, however, unfortunate that some health officers do not report the definite number of cases—but simply say “many” or “numerous,” or “a few,” which effectually defeats such computation.

Taking those reports which are exact, and the deaths in those towns, it is found that the percentage is as follows :

	Per Cent.
Measles .....	0.85
Scarlet Fever .....	5.85
Diphtheria .....	31.36
Whooping Cough .....	4.00
Typhoid Fever .....	38.20

The percentage of deaths from typhoid fever is large.

An epidemic of measles in Hartford ; 37 deaths in April, estimated on the above death-rate, would give 4350 cases in that town.

The credit of securing such prompt monthly reports by the town health officers is due to the personal efforts of the county health officers in those counties in which it is so done. It is one of the great benefits resulting from the new administration.

It is greatly to be desired that all the county health officers will exert their influence with their appointees to insure the regular discharge of this important duty.

It is very interesting to note the potency of recognized authority upon office-holders.

County health officers appoint, and can remove the town health officers at will.

Whereas, under previous conditions the duty of reporting contagious diseases by the town officer was performed so infrequently and irregularly as to be almost worthless, it is now done, where the county officers request it, with commendable promptness.

There is not much in the way of special mention to be said for the last quarter.

On February 10th I received notice from the health officer of Middletown that a case of small-pox had appeared in that place in the person of an Italian. The usual precautions for public protection were taken immediately, and no secondary cases have occurred.

On February 17th the Board of Health of New Haven reported a suspected case of small-pox in the person of a domestic in a family on Grove street. The patient was isolated in the Hospital for a few days, disinfection of her room and appurtenances practised, but it was then determined that the true diagnosis was chicken-pox.

On the 21st of February, still another case was reported from the General Hospital in the person of a nurse. She too, was removed to the small-pox hospital, and the General Hospital was placed in quarantine. But after twenty-four hours this too proved an erroneous diagnosis.

On Sunday evening, January 5th, Prof. Brewer and myself accepted an invitation to address the Young Men's Club of the United Church, on the needs of a hospital for contagious diseases in New Haven.

The weather was exceedingly inclement and the audience was not as large as usual, or as the subject deserved. Abstracts of the addresses were printed in the last annual report of the Board.

## QUARTERLY MEETING.

NEW HAVEN, CONN., July 16th, 1896.

The regular quarterly meeting of the State Board of Health was held this day at the office of the Secretary, at New Haven.

The President being absent, the meeting was called to order by the Secretary, and on nomination by Dr. Wordin, Dr. Goodwin was chosen to preside *pro tempore*. The meeting was opened at 2.30 P. M. There were present Dr. Goodwin, Dr. Wordin, T. H. McKenzie and Dr. Lindsley.

The minutes of the last meeting were read and approved.

The report of the treasurer was read and ordered on file.

It being the annual meeting, the Board proceeded to the election of officers for the ensuing year. The election resulted in the following :

*For President*—Prof. W. H. Brewer.

*For Treasurer*—Dr. C. A. Lindsley.

*For Auditing Committee*—W. H. Brewer and G. P. Ingersoll, Esq.

*For Managers of "Temporary Homes"*—For Hartford County, Dr. C. A. Lindsley ; for New Haven County, Prof. W. H. Brewer ; for New London County, Dr. G. H. Wilson ; for Fairfield County, Dr. Wordin ; for Windham County, G. P. Ingersoll, Esq. ; for Litchfield County, Dr. R. S. Goodwin ; for Middlesex County, Dr. G. H. Wilson ; for Tolland County, T. H. McKenzie, C.E.

Numerous communications were read and their contents respectfully considered.

One communication stated that "Paris green" was often so carelessly handled and the wrappings of the packages so loose that it was seen sprinkled upon the sidewalk and that it might well be suspected to be a frequent source of danger.

On motion of Dr. Wordin it was :—

*Resolved*, That the county health officers be requested to notify the health officers of each town in their respective counties, directing them to see that all dealers in Paris green use extra care in the packing and handling of the article, and that they caution

every purchaser of the danger of the poison, and urge them to exercise care in its use.

A communication from a health officer requesting the State Board to send an expert to investigate some cases of diphtheria occurring in two families, led to some discussion and resulted in the following action :

*Whereas*, It is highly desirable that every contagious disease in the State be thoroughly investigated as to its origin. And

*Whereas*, The limited appropriation to the State Board of Health does not enable it to undertake an inquiry in all cases. And

*Whereas*, The town in which the outbreak occurs is the party most concerned, and generally the investigation can be made most economically and successfully by the local health officer, therefore be it

*Resolved*, That it is the opinion of the State Board that it is an important part of the duties of local health officers to make diligent and earnest inquiry as to the source of every outbreak of contagious disease that comes to their notice. That such practice will make them far more useful officials and bring results of a most valuable and practical character.

*Resolved*, That the county health officers be requested to use their influence with the town health officers to promote this object.

It was also voted that the county health officers advise the town health officers to have all the school-houses in their respective towns thoroughly cleansed and fumigated with sulphur fumes during the present vacation. Especially should this practice be imperative in all the school-houses where any contagious disease has prevailed.

The report of the Secretary was read and ordered on file.

On motion of Mr. McKenzie it was

*Voted*, That the Board will visit the Bristol disposal works on some day in September next. The date to be fixed by the President and Secretary.

On the announcement that the next meeting of the American Public Health Association will be held in Buffalo in September, it was

*Voted*, That in consideration of the valuable information derived from attendance upon those meetings, as many of the members of the Board as can do so should attend as delegates.

No further business offering, the meeting adjourned *sine die*.

Attest,

C. A. LINDSLEY, *Secretary*.



## SECRETARY'S REPORT.

*For the Quarter ending June 30th.*

## HEALTH OF THE STATE.

As estimated from the mortality reports of registrars, does not show a gratifying result. The deaths were 54 more than in the previous quarter. They numbered 259 more than the average in the same quarter for the previous five years, and were 331 more than in the corresponding quarter last year.

As to some of the more prominent diseases :

	1896.	1895.
Measles .....	150	10
Scarlet Fever .....	20	24
Diphtheria and Croup ..	90	64
Whooping Cough .....	21	36
Typhoid Fever .....	24	56
Consumption .....	367	364
Pneumonia .....	404	331
	<hr/>	<hr/>
	1076	887

We do not yet quite succeed in obtaining from all the health officers monthly reports of contagious diseases, but we are making progress. The town health officers of some counties report in full, but in several of them one to four or five neglect it.

Those health officers who do report enable me to estimate the percentage deaths to all cases. For the following diseases for the last quarter it is as follows :—

Measles .....	1.8
Scarlet Fever .....	4.9
Diphtheria and Croup .....	24.
Typhoid Fever .....	29.

The chief epidemic of note during the quarter was measles, than which I believe it has never prevailed more widely, although the deaths attributed to it directly are comparatively small. The whole number of cases reported was 5,237. But this does not represent the whole number by a large figure. For instance Hartford, where there were 47 deaths, did not report any cases at

all. It is not the custom also in some other towns to report this disease.

The Secretary has had the usual amount of correspondence, or more, and has had occasion to visit other parts of the State, on various matters, respecting some of which visits, he has made special reports.

### QUARTERLY MEETING.

NEW HAVEN, CONN., Oct. 9th, 1896.

The regular quarterly meeting of the State Board was held this day after due warning, at the office of the Secretary in New Haven.

The meeting was called to order at 2.30 by President Brewer. There were present Dr. Wilson, Dr. Goodwin, Dr. Wordin, Mr. McKenzie, Mr. Ingersoll and Dr. Lindsley. Also by invitation County Health Officer Hoadley; also Dairy Commissioner Noble and Deputy Commissioner Gilbert; also Mr. Turbert, Mr. Burns and others of Journeymen's State Board of Plumbers.

Report of Treasurer was read and ordered on file.

Routine business was suspended, by vote, to give a hearing from a committee on the part of the Journeymen's State Plumbing Association. Mr. Burns presented the business, as a petition to the Legislature for an act to regulate the practice of plumbing, asking the State Board of Health to present the bill to the Legislature as being more favorably received than if presented by the plumbers.

*Voted*, on motion of Mr. Ingersoll, that the petition be referred to a committee of two to report at the next meeting. It was then by vote made to consist of three, to wit: The President, Secretary, and T. H. McKenzie, C.E.

Mr. Noble, dairy commissioner, appeared before the Board by invitation, to ask that if any bill was presented to the Legislature relating to a better milk product, the dairy commissioners might be consulted in preparation of said bill.

They represented the dairymen of the State, and were impressed with the importance of additional legislation on the subject of the public milk supplies.

After some discussion the subject was referred to the Committee on Milk appointed at a previous meeting, consisting of the President, the Secretary and Dr. Wordin.

The business next in order was the correspondence. Numerous communications were presented and read by the Secretary. They received respectful consideration, and some of them were considered at length. Without a formal vote the Secretary obtained the opinions of the Board on several questions developed by the correspondents, and on which he wished instruction.

On motion of Mr. Ingersoll the following vote was carried :  
*Voted*, That this Board request the honorable railroad commissioners, in the interest of public health, to require a very strict observance on the part of the steam railroads in this State of the requirements of cleanliness in caring for the several water closets at the passenger depots throughout the State.

The question of holding a local public conference at some town in the State, on sanitary subjects, was proposed by the Secretary, and after some discussion the subject was by vote referred to a committee to report upon at the next meeting.

The President appointed as such committee Dr. Lindsley, Dr. Wordin and Dr. Wilson.

County Health Officer Hoadley reported the result of a prosecution of an offender against the Medical Practice Act, in Waterbury, in which conviction followed, but the penalty\* was not inflicted, and no record of the verdict was made by the court, the reason given being that the convicted party was poor, and had many sympathizing friends.

The Secretary offered his quarterly report, but owing to the brevity of time remaining before members were obliged to leave, to take trains for home, and because some other business needed attention, it was not read.

On motion of Mr. Ingersoll, and after a full consideration of the subject, it was

*Voted*, That the compensation to Miss Coburn in future for clerical services shall be \$40 per month, and for Miss Lindsley \$30 per month.

*Voted*, That Mr. Geo. P. McLean be notified of the time when the Board will inspect the Meriden sewage filtration fields.

*Voted*, That the Board visit them on the following Friday.

No other business offering, the meeting adjourned.

Attest:

C. A. LINDSLEY, *Secretary*.

\* The party afterwards began practice in New Haven, was again arrested, and paid the penalty of \$100.

In a retrospective view of the progress of the interests of public hygiene, during the past year, there are more evidences of advancement than can be found in any single preceding year. The machinery of administration, which is necessarily somewhat complex, is steadily getting into smoothly running order. System and method are gradually taking the place of the chaos of former times. There is unanimity of sentiment and uniformity of practice among the local health officers.

There is a better knowledge of the principles of sanitation among them than ever before. There is a deeper interest in the work and a better appreciation of its importance entertained both by the officers and the general public than was ever previously manifested.

The administration of public hygiene in the State, such as the law contemplates, involves a system so broad and comprehensive, that it will include a sanitary supervision of every town, city and village; indeed its effective purposes reach still further. It aims to exert a controlling influence upon families and even upon individuals, so far as their conduct may be prejudicial to public safety.

The successful operation of such a system implies a head, and an intimate relation of the head with all its parts. The State Board of Health is the legally constituted head, of the system in Connecticut, and although the system is susceptible of much improvement in its details, if the suggestions offered in this report are adopted, the practical working of it will be greatly improved.

Respectfully submitted,

WM. H. BREWER.

C. A. LINDSLEY.

GROVE H. WILSON.

RALPH S. GOODWIN.

NATHANIEL E. WORDIN.

THEODORE H. MCKENZIE.

GEORGE P. INGERSOLL.

# SECRETARY'S REPORT.

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By C. A. LINDSLEY, M.D.





## SECRETARY'S REPORT, 1896.

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The functions of the State Board of Health, as prescribed in the statute, are of such a nature, and so ill-defined and limited, that the story of its work from year to year possesses a sameness and lack of variety which impairs its interest to the general reader. The duty of the Board is, to keep in touch, as best it can, with every part of the State, with special reference to the prevalence of sickness in any form, but especially when occurring as epidemics; to investigate their causes; to enquire into the effects upon the public health resulting from particular conditions, relating to localities, employments, food, or other unhealthy influences; when asked to do so, to inspect and advise in regard to the sanitary conditions of hospitals, prisons, and other public institutions; when "reasonably requested," to give information and advice to local health authorities on all sanitary questions.

In addition to the above, it has the general supervision of the State system of registration of Births, Marriages and Deaths.

The last function occupies a large portion of the time of the executive officer of the Board.

In the relations of the State Board to the public health, its function is practically that of a Bureau of Information on questions of public hygiene, the same to be dispensed when asked for. Its office is educational in purpose. Consequently its work cannot be aggressive. It is without authority in local sanitary matters, either mandatory or inhibitory.

The advice of the Board may be sought or not, concerning the sources of public water supplies, the pollution of streams, or upon other questions of deep import to the public health, and, if sought and given, may be acted upon or ignored, at the option of parties interested.

It is desirable that the exact relations of the State Board of Health to the public should be clearly understood, that the Board may not be held accountable for conditions respecting which it has no responsibility.

## SANITARY ADMINISTRATION.

In the exercise of its functions as an educator, the efforts of the Board have been greatly hindered heretofore by reason of the absence of any specified means of communication with the local health officers of the State.

The relation of the Board to them, although always of the most harmonious and friendly nature, have yet been so loose, ill-defined and infrequent, that no systematic, general and uniform method of public sanitary administration could be established. Each local board was an independent power in its own jurisdiction, and there was nothing in the legislation of the State to bring these separated health authorities into mutual relations with each other, or with the State Board.

Under such difficulties it was not reasonable to expect that a merely advisory body, without authority, surrounded by some 200 other health organizations, all pursuing a common object, but with nothing in common between them, having no connecting associations, and no common mode of procedure,—I say it was not to be expected that in those circumstances the best progress in public hygiene would be made.

The conditions were still further complicated by the fact that the local health authorities held their office subject to annual removals by popular elections. Worse than that, they were for the most part elected to some other office, to which their function as health officials was only incidental, and regarded as of comparatively trivial importance.

This was the condition respecting sanitary administration, in Connecticut, only a very few years ago. The attention of the reader is called to it here chiefly to show what good results have followed the legislation of 1893.

The laws enacted at that time practically reorganized the sanitary administration of the State so far as it relates to the towns, but did not materially change the situation in regard to cities and boroughs.

In respect to towns the operation of the new laws has been to lengthen the tenure of office of the Health Officer; to make it independent of the popular vote; to give him suitable compensation for valuable services rendered; to impress upon the incumbent of the office a due sense of the importance of his duties and of the responsibilities he assumes; and to elevate it in public

estimation to the standing and dignity which should properly attach to it.

As a legitimate and reasonable sequence to this proper recognition of the dignity of the office, a new and lively interest in the subject of public sanitation has spontaneously arisen among the town health officers ; organized associations have been formed in every county in the State which have brought into intimate and profitable coöperation the State Board of Health, the County Officers and the Town Health Officers. The County Officers and Town Health Officers have meetings at frequent intervals in their respective counties, and one or more members of the State Board are very commonly present at any of these gatherings. The object of these meetings is mutual instruction and conference, and the consideration and discussion of practical questions on matters relating to their official duties.

The normal product of this, as the fruit follows the blossom, has been the adoption of definite principles of action, the codification, under the direction of the State Board and the legal advice of the County Officers, of a system of sanitary regulations, applicable to every town, thus bringing, so far as the towns are concerned, the whole State under one general and uniform system of hygienic management and control. The benefits resulting to the town communities will be only another confirmation of the experience so often verified, of the superior efficacy of well-organized and disciplined forces.

The results have been so satisfactory, as applied to towns, that the question naturally arises: What more can be done to improve the public hygiene of Connecticut? Is it practical and expedient to extend the application of the same principles which prevail in the appointment of Town Health Officers to those of boroughs and cities? The operation of those laws has been so beneficial and useful to Town Health Officers and town work, it would seem to be the strongest argument that can be found for applying the same conditions to the sanitary administration of the larger and more populous communities.

The two prominent features in the law alluded to, which have been most potent in good results, are : 1st, the lengthened tenure of office ; and 2nd, the complete disunion of the office from party politics.

The public will not reasonably expect that the best efficiency in health administration will be rendered, so long as the emolu-

ments and honors of Health Officers are used as a recompense for services given by ward politicians and party hacks.

When an official public servant knows that he holds his office as a reward for services to his political party, and that the same services in the future will count for more, in helping him to retain his office, than will the faithful discharge of official duties, it will be easy to determine in which direction his efforts will be strongest. At least such an officer cannot enjoy the full confidence of the public.

In no department of the public service would the benefits of civil service reform be more marked than in the sanitary administration of cities and boroughs.

There is the more urgent reason for bringing the system of public health administration in the cities and boroughs of Connecticut into harmony with that of the rest of the State, because the majority of the population of the State are living in the cities and boroughs.

The usefulness of the State Board of Health, even as an advisory body, is increased very much by this increase in its opportunities for coöperation with all the health officials in every part of the State. The profitable results of this frequent intercommunication, in good sanitary work, will be still further enhanced if the local officers are not liable to annual changes. The special duties of a Health Officer are for the most part to be acquired after his appointment to office. He does not know them intuitively, and they have not been taught him distinctively, in any previous course of instruction in which he has been engaged.

An efficient Health Officer is so as a result of practical personal experience, self-training and special studies of sanitary subjects. The first year of office is largely an apprenticeship in the performance of new duties. An annual rotation in office is therefore a mere succession of apprentices, without the incentive to good work which an assured continuance of service would give. It can not be assumed that the duties and responsibilities of a health officer of a populous city are within the capacity of an ordinary intelligence, if it is inexperienced and untrained. Many other advantages might be urged in defence of long-term appointments, as are already apparent in the four-year terms of the town officers, but it is needless to enlarge further upon the higher value of skilled and experienced service, as compared with that which is inexperienced.



Another important consideration has a strong bearing upon this whole subject. The law, in distinct terms, makes it the positive duty of the State Board of Health to make "in each year a report in writing to the Governor upon the vital statistics and the sanitary condition and prospects of the State." The best sources of information on which to base such report should be the health officers in their respective jurisdictions. To that end, it is highly desirable that Health Officers should be intelligent and efficient; that the sanitary administration of the whole State should be, so far as practicable, conducted on some general and common system; that instead of the diverse regulations respecting contagious diseases, in force in some places, there should be a general statute, requiring that certain contagious diseases shall always be promptly reported to the Health Officer of the locality in which they happen. That this shall be a State law, uniform in its operation all over the State. Also that the law, which now requires Town Health Officers to notify the State Board of small-pox and epidemics, shall apply with equal force to the Health Officers of cities and boroughs. If the State Board of Health is to report upon the sanitary condition of the State, its means of information ought not to be limited to the small towns, which contain less than half the population of the State. Therefore the law which requires an Annual Report, from every Town Health Officer to the State Board, should also require the same from the City and Borough Health Officers.

It is difficult to conceive of a good reason why the condition of the public health in the large communities should not be communicated to the State Board of Health as regularly and fully as the health of the small country towns.

In brief, it seems highly desirable to so change the present legislation as to bring into greater uniformity the methods of sanitary administration throughout the State. To accomplish this only the following modifications are essential :

1st. A lengthened tenure of office of City and Borough Health Officers, to conform to that of Town Health Officers, namely, four years.

2nd. To liberate the Health Officers of cities and boroughs from the thralldom of political party obligations, as Town Health Officers are, by making their appointment independent of party officials.

3rd. To enact a statute of uniform effect throughout the State,

requiring the prompt report of contagious diseases to Health Officers.

4th. To require annual and stated reports from the Health Officers of cities and boroughs to the State Board of Health, as now given by the Town Health Officers.

And finally, to place the State Board of Health in the same relations with the Health Officers of the cities and boroughs as they now are with the Health Officers of towns.

#### NOTIFICATION OF CONTAGIOUS DISEASES.

It is very gratifying to be able to say that this office is now in receipt every month of a report from almost every Town Health Officer in the State, giving the number of persons sick of contagious and infectious diseases reported to them during the preceding month. These monthly reports of prevailing sickness have been steadily improving, in promptness and completeness, from the beginning of the year. From some of the counties every town officer reports, while in other counties, a few towns are wanting. I hope to be able to say, very soon, that no Town Health Officer in Connecticut has failed to make a report for the preceding month.

Several of the city and borough officers have also rendered monthly statements of sickness, fully and promptly, for which the State Board desires to express its high appreciation and thanks, and the more so, because it is a gratuitous service, which the law does not require of them.

"'Tis a consummation devoutly to be wish'd" that the practice of reporting all contagious diseases might become uniform, not only in towns but also in cities and boroughs; and so instead of a partial, get a full report. The value of such information is greatly enhanced by its accuracy and completeness.

The next Legislature will be petitioned to so change the present law as to aim at securing this result.

The prompt and full reports of communicable diseases everywhere, followed by the immediate attention of the health officer, would assist vastly, both directly and indirectly, in their restriction and prevention.

## DIPHTHERIA AND ANTITOXIN.

Diphtheria has become the most fatal disease of childhood at the present time, in this state. Two very important facts have been recently developed in relation to this disease, as a result of bacteriological investigation. One is, that the disease is always caused by a special micro-organism, which is present in every case of true diphtheria. The other is, that the blood serum of animals, which have been rendered immune to diphtheria, is curative of the disease in other animals and in the human subject.

The same series of investigations have determined that there are also many cases of diphtheroid sore throats, which cannot be positively diagnosed from true diphtheria by any examination at the bedside; that a sure diagnosis can only be made by bacteriological methods. The significance of these facts, as regards the public health, lies in this: that true diphtheria, however mild, is always infectious; while diphtheroid, in many of its forms, is very slightly so, and rarely a dangerous disease. Hence the importance of providing the means, in every large community, of making bacteriological tests, not merely for the welfare of the patient, but for the protection of the public; in order that mild cases of true diphtheria may not go about exposing others, and that cases of diphtheroid may not be needlessly restrained.

Again, since it is in the interest of public safety that every case of diphtheria shall be cured as quickly as possible, it is important that means for administering the antitoxin treatment, which is the only known specific remedy, should be provided as promptly as needed. But antitoxin is an expensive agent, and often quite beyond the ability to procure of many poverty-stricken people, among whom diphtheria most frequently prevails.

In view of these considerations, it is the practice, in many cities in other states and in a few in Connecticut, to provide for a bacteriological examination, without expense to the patient, in all suspicious cases; and also to supply, through the local health officer, such amount of antitoxin, gratuitously, as may be needed; the whole business to be managed under specified rules and regulations, but so simply and easily understood that the usefulness of the plan may not be defeated by unnecessary "red tape." This expenditure is defended on the same grounds as the expenditure for the fire department, viz.: a means of public safety. It should be made available as promptly as the necessity requires.

## TUBERCULOSIS AND MILK.

The investigations made in late years, concerning the cause and prevalence of tuberculous diseases, have developed certain revelations of the highest importance to the welfare of man. Chief among them are the following : The surprising extent to which tubercular disease prevails among the domestic animals, especially in beef cattle and milch cows ; the identity of the disease in the human subject, and in the bovine race ; the discovery of the specific germ which causes the disease ; and the intercommunicability of the infection, between the lower animals and man, notably through his food, brings the subject into the list of hygienic influences, as one of primary importance.

There are no articles of human food more generally used among all classes than beef, veal and milk. If such food is liable to contain the germs of a disease which constantly destroys one in every seven of the human family, and if food so infected can be a medium of communication, we can scarcely conceive of anything of more vital concern to human health. At the last session of the legislature the subject received very earnest consideration and will doubtless be brought to the attention of the incoming Assembly. No more serious matter for deliberation and action will come before it.

Aside from the question of tuberculous infection, there is another aspect of milk, as an article of diet, of scarcely less importance.

Within a very brief period, Connecticut has suffered from four serious epidemics of typhoid fever, which were wholly due to infected milk. The one in Stamford was probably the most extensive in the history of the state. In about six weeks 386 primary cases of the fever were developed, over 95 per cent. of which were known to have been consumers of the milk of one dealer. It is not so easy to estimate the number of cattle-fed babies that suffer every year with infantile diarrhœas due to germ-laden milk. But if they could be accurately counted they would doubtless outnumber the typhoid victims by many hundreds.

These maladies differ from tuberculosis in that they do not come from the cow. But the milk becomes infected with the disease germs after it has been removed from the cow. It is infected in consequence of the filthy habits of dairymen in preparing the milk for their customers. And it is so widespread



and dangerous an evil that it imperatively commands attention. The alarming results which have so often occurred from the use of contaminated milk, demands that those who deal it out to consumers shall be held to some responsibility for its purity and freedom from disease infection. The subject is under consideration by the State Board of Health and others, and the Legislature will be asked to provide some safeguards to protect the public from the dangers to which they are now exposed by the present methods of the milk traffic.

#### ISOLATION HOSPITALS.

The establishment of hospitals for the care of patients suffering from contagious diseases is one of the most effective means known for preventing their general prevalence. Public attention should be frequently directed to such hospitals, not only for setting forth their utility for the common good, but also for the purpose of removing the unfounded and unreasonable prejudices against them which so widely exist in the popular mind.

It must be borne in mind that they are in no sense charitable institutions ; that, although they should be furnished with every means, both medical and surgical, and every appliance for the best care and restoration of the patient, so that the chances of recovery will be better than in most homes, yet the primary and main purpose of an isolation hospital is, to be a safeguard to the public against dangerous pestilences. Their protective capacity, in this respect, makes them essential to the safety of all closely-populated places, especially where the population is so dense that several families live under one roof.

Modern science, tested by large experience in many cities, has demonstrated, beyond the shadow of uncertainty, that hospitals for the treatment of contagious diseases can be conducted with entire safety to the inhabitants of the surrounding vicinity.

An air space of forty feet about the building has been proved to be amply protective against all contagious diseases, except small-pox ; there is, therefore, absolutely no danger to be feared by the neighbors from contagion through the atmosphere. Small-pox patients should never be received in hospitals in which any other diseases are treated.

The prejudices against such hospitals arose, and were not unfounded, in the days before the value and employment of disinfectants were known. The disastrous experiences resulting



from the overcrowded and badly managed hospitals of former times gave to them, not unjustly, the name of pesthouses. But the hospitals of modern times differ, in all that pertains to sanitation, as widely from those of the last century as, in the facilities of travel, the ocean steamship differs from the old canal packet. Consequently, the opprobrious name, pesthouse, as applied to a hospital conducted on scientific methods, is a misnomer, and is never so applied in these days, except in ignorance or in malice.

Every city and every considerable town in the state ought, in behalf of public safety, to provide a suitable place for the isolation and medical treatment of contagious maladies ; not in the name of charity, but in the exercise of public prudence.

#### SANITARY INSPECTORS.

The true mission of a health officer is to prevent disease, not to cure it ; therefore his labors will be most fruitful when directed to the removal of the causes of "preventable" diseases before they become active.

The man who discovers and destroys a rabid dog, before he has had opportunity to injure anyone, renders a better service than if he had waited until the dog had bitten several persons before he killed him. It is just as self-evident that that health officer will be the most efficient and useful public servant who anticipates the effect of insalubrious conditions and removes them before they become injurious. That such conditions exist to some extent in every community, no one will venture to deny. The first step is to find them. There are two ways of finding them. In one way, the health officer may wait until they are reported to him. That is the worse way ; because the complaints are often prompted by neighborhood feuds and spiteful personal animosities, or reluctantly made after patient endurance, and at the risk of exciting an estrangement between friends. Besides, in this way only a portion of the unsanitary places are reported, and these only by an *ex parte* statement, in which the personal element is always to be considered. It is much the worse way.

The other way is as a result of systematic and impartial sanitary inspection of every part of the town. It should be undertaken and carried out as a special work to be performed, not spasmodically and interruptedly, but continuously until finished. It should be reported at least annually. This should be done, and

full records kept of the conditions found on each of the various premises examined. This is the better way, indeed the only satisfactory way. Information obtained in the latter way does not discriminate between citizens, and gives the health officer a comprehensive view of his whole field of operations, and so enables him to work with more method and more successful results.

But it is quite evident that, except in the smallest communities where such work is least important, it will be impracticable for the local health officer to do this work, personally, in the way mentioned. The law supposes him to be a physician, engaged in the daily practice of his profession. Consequently, it will be impossible for him to devote many consecutive days continuously to such duties.

Again, the duties of a sanitary inspector do not demand the learning and trained skill which are essential to success in the treatment of disease. Any person with a common school education, average intelligence and good judgment, would be competent, after instruction by the health officer, to inspect and report upon the state of cesspools, privy vaults, sink-drains and the various modes of disposing of household sewage, as well as upon the source of water supply and other domiciliary conditions, which might influence health.

The immediate effect of appointing a sanitary inspector in a town, in causing a very general cleaning up, of back yards, etc., is astonishing. It is well to allow an interval of a week or ten days between the time of the appointment and the beginning of his service, in order that this effect may have its full operation.

On the point of economy, too, the plan will be an advantage to the towns, because such an inspector could be employed at less expense than a physician could justly claim for the time he would have to give to it. It is therefore worth considering if local health officers ought not to be allowed to act by proxy in such work, and include in their account a reasonable amount for the services of a hired inspector. The advantages of this proposition seem to be self-evident.

If no sanitary inspector is employed, and if no methodical examination of premises is practiced, the health officer acting to abate nuisances only upon complaints of citizens, then there are reasons for grave doubts, if it is good policy, and for the best public interest, to require, as some towns do, by a special regula-

tion, that all complaints shall be made in writing over the signature of the complainants. The inevitable effect of the rule is, to secure the abatement of only a portion of the insanitary conditions, and often to incite new and aggravate old neighborhood discords; besides in many instances making the health officer the instrument of gratifying personal spites, and obliging him to side with one or the other of the disputants. It is a bad plan every way.

### SANITARY LITERATURE.

It is believed that it would be a very judicious and profitable expenditure of a few dollars of the public money in every town, if they were appropriated to the purchase of a small number of books on sanitary subjects, for the use of the health officer. If there is a public library in the town, it would be a sad oversight if two or three shelves are not stocked with a good selection of instructive books on public hygiene. The attention of the patrons of the library should be directed to them, as most profitable reading. Many inexpensive works are now published which would be of great assistance to health officers. They would derive numerous hints of direct practical value from the reading of them on subjects which concern their immediate official duties, such as house sanitation, the proper methods of sewage disposal, suggestions about the abatement of nuisances, the hygienic treatment of infectious diseases, the control of epidemics, etc., etc. A sanitary periodical should also constitute a portion of the literature of the office.

### THE REGISTRATION OF PRACTITIONERS.

During the year ending September 30th, 1896, certificates of registration were issued to 213 practitioners, of whom 205 were engaged, or to be engaged, in general practice. Two were to practice midwifery only, and six were specialists, exclusively. Of the 213 registered, 98 were residents of other states, of whom 54 were living in New York, 18 in Massachusetts, 7 in New Jersey, 9 in Pennsylvania, and 1 or 2 in each of the States of Rhode Island, New Hampshire, Vermont, Maine, Delaware, Washington, D. C., and Illinois. Of the 98 non-residents in Connecticut 39 were recent graduates, having received their degree in 1895 or 1896, and many of these were residing in Hospitals, and probably intend to take up practice in Connecticut. The

remaining 59 non-residents were older graduates, some of them intending to become permanent residents, and others are only summer residents, while still a few, doubtless, avail themselves of the privilege so cheaply offered, of registering, and thus acquiring the right to practice in Connecticut at some future time if they choose to do so.

Of the 213 newly registered only 115 were Connecticut residents at the time of their registration, 114 were just entering upon their professional career, having graduated the same year or the year before they were registered. Of all who were registered 9 were certified to be qualified to practice by the examining committees of the State Medical Societies. The other 204 were registered as graduates from "Reputable Medical Colleges."

There were many graduates, of medical colleges not on the Reputable list, who applied for registration, but most of them declined the examination and are doubtless seeking an abiding place in some of the few States in which the restrictions upon medical practitioners are wanting, or less rigid.

The beneficial effects of the "Medical Practice Act" are more apparent now than in the first year of its operation. Its provisions were such that previous to a certain date, every quack and medical impostor in the State could be registered and have unmolested liberty, under the protection of the law, to victimize as many dupes among the credulous as he could. Time and circumstances will remove the host of charlatans who took advantage, at that time, of the special privilege accorded them, and since October 1, 1893, ignorant and illiterate pretenders to medical practice are no longer permitted to become legally protected.

The strong opposition to the law which exhibited itself so actively when it was proposed to the legislature has largely disappeared, and many who at that time were hostile to its passage are now among its earnest defenders.

The law, however, is not altogether quite what its authors desired. In order to secure its enactment several important compromises had to be conceded to its opponents. Probably at the coming session of the General Assembly some amendments will be offered for consideration. The operation of the law has met with such general approval by all the medical societies of the State, it is not believed that any antagonism to the proposed changes will appear. Among the changes which will be asked, will be one in conformity with the following resolution passed at a meeting of the New Haven County Medical Association :



“ *Whereas*, large numbers of graduates, of colleges which in this state are recognized as legal and reputable, are being rejected by examining boards in other states, where the possession of such diplomas is not in itself sufficient to entitle the holders thereof to practice, and

*Whereas*, as a consequence of the foregoing fact, this State has become the dumping ground of other states with respect to undesirable practitioners, and

*Whereas*, in our opinion, it behooves the State, for its own protection, to guard against such an invasion, it is

*Resolved*, by the New Haven County Medical Association, that the attention of the other County Associations, the various State Medical Societies and the various committees on lists of reputable medical colleges, be called to this state of affairs ; and

*Be it Resolved*, that the State Committee on Legislation be instructed to advocate the amendment of the law, so that all candidates for registration be required to pass an examination, as is now the case in New York, Pennsylvania, New Jersey and many other states.”

#### PROSECUTIONS FOR VIOLATION OF THE MEDICAL PRACTICE ACT.

Many illegal practitioners have been stopped without the formalities of a suit, and without suffering the penalty. The following are reports of the few prosecutions that have been undertaken :

The County Health Officer of Hartford County writes :

“ A warrant was issued against one visiting practitioner or peddler of medicine, but he left the county before the warrant could be served. I have had occasion to write to several unregistered midwives, cautioning them against violation of the law.”

The Health Officer of New Haven County has reported that but one prosecution has been carried to a final verdict. Another is still in court on an appeal. He says :

“ I would like to have you know that in the case prosecuted by me in Waterbury against one Helen Laura Keane, she was convicted in the City Court and fined \$100.00 and costs ; took an appeal to the District Court, where she was tried before a jury and again convicted, the same fine being imposed. The authorities in charge of the Court disposed of the case without collecting the fine or cost ; in fact, as near as I can learn, the woman went scot free and is now practicing in New Haven,



but I have never been able to get evidence against her up to the present time.

There is nothing encouraging to us, as County Health Officers, in trying to enforce this law when the authorities in charge of courts allow the whole thing to become practically a farce."

The New London County Officer says :

"I have to report that but one prosecution has thus far been brought before the court on my complaint, or come to my knowledge. That was the case of a so-called minister of the gospel who was said to be practicing medicine among his church people, and I made a very careful investigation of the case and obtained conclusive proof against him; had him informed against and brought before the City Court of Norwich. After many delays the case came to a hearing and the defendant pleaded 'Guilty,' was fined one hundred dollars and costs of prosecution, from which judgment he took an appeal to the Criminal Court of Common Pleas. In this court, through his counsel, he settled the case by paying the fine and costs imposed by the City Court and so escaped having a judgment entered up against him.

I have investigated a similar case where I was unable to obtain the necessary evidence to warrant me in bringing the party before the courts.

Fairfield County Health Officer reports :

"I would say that there has been but one actual prosecution. Quite a number of unregistered midwives have been summoned to the office of the prosecuting attorney, or to my office, and the law explained to them, but owing to their ignorance of the law, in most instances, no prosecutions have been brought.

The one case of prosecution to which I refer was that of William H. Sagendorf, of Danbury, who advertised himself extensively as a 'Clairvoyant Physician.' Upon the matter being brought to my attention in the winter of '94-5 I interviewed Sagendorf and apprised him of the law, of which he appeared to be ignorant, having moved to Danbury from an adjoining State. The result of that interview was that he left Danbury and did not reappear there for a year. Upon learning that he had returned, I obtained with some difficulty evidence of his illegal practice, and I placed it in the hands of the prosecuting attorney of the city of Danbury. Sagendorf was arrested, tried in the City Court, found guilty and fined one hundred dollars and costs. He appealed to the Court of Common Pleas, but upon the eve of trial settled his fine and withdrew the appeal.

It was currently reported at the time that he had made an arrangement with a Danbury physician, duly registered, by which he (Sagendorf) made diagnosis and the registered physician, nominally at least, did the prescribing. This arrangement did not continue, however, and Sagendorf soon left the county and, I believe, the State."

### THE EXAMINATION OF CANDIDATES FOR REGISTRATION AS MEDICAL PRACTITIONERS.

During the year ending October 31, 1896, the Examining Committees have held ten special examinations.

Of these the Committee of the Connecticut Medical Society conducted seven, the Committee of the Connecticut Homœopathic Medical Society conducted one and the Committee of the Connecticut Eclectic Medical Association conducted two.

The total number of candidates examined was fifteen, of whom nine were found qualified and six were found not qualified.

The following is a tabulated statement of the work of the three committees :

#### COMMITTEE OF CONNECTICUT MEDICAL SOCIETY.

Date of Examination.	Candidates for.	Passed.	Rejected.	Total.
1895.				
Oct. 4th .....	General practice....	1	--	1
Oct. 4th .....	Midwifery .....	1	--	1
1896.				
Jan. 10th and 11th..	General practice....	--	1	1
March 6th .....	General practice....	--	1	1
April 10th .....	Midwifery .....	1	-	1
May 22d and 23rd ...	General practice....	1	--	1
June 26th and 27th..	General practice....	2	2	4
Aug. 19th and 20th..	General practice....	1	--	1
		<u>7</u>	<u>4</u>	<u>11</u>

#### COMMITTEE OF CONNECTICUT HOMŒOPATHIC MEDICAL SOCIETY.

Date of Examination.	Candidates for.	Passed.	Rejected.	Total.
1896.				
June 26th and 27th..	General practice....	--	1	1

#### COMMITTEE OF CONNECTICUT ECLECTIC MEDICAL ASSOCIATION.

Date of Examination.	Candidates for.	Passed.	Rejected.	Total.
1895.				
Dec. 9th .....	General practice....	1	--	1
1896.				
May 9th .....	General practice....	1	1	2
		<u>2</u>	<u>1</u>	<u>3</u>

In addition to the above a considerable number of others have made application for examination but failed to present themselves at the time appointed.

The total number examined by the three committees was fifteen, of whom only nine were found qualified.

The examinations by the Committee of the Connecticut Medical Society and the Connecticut Homœopathic Medical Society occupy two successive days. The examinations of the Committee of the Connecticut Eclectic Medical Association is concluded in one day. The markings are on a scale of 100. In order to pass satisfactorily the candidate must have a marking of not less than 75.

#### CORRESPONDENCE.

The letters following, are a few only of many, asking information and advice upon a variety of subjects.

ROXBURY, CONN., Feb. 6th, 1896.

*Prof. Chas. A. Lindsley, Secretary State Board of Health.*

DEAR SIR:—We have an epidemic of measles here at present, some thirty or forty cases in some fifteen different families.

What is your opinion regarding the contagiousness or transmission of measles through contact of clothing of members in affected families who do not have the disease, or of visitors to carry the disease in the clothing to a third person? What restrictions or quarantine regulations would you advise?

Much opposition is met with if anything is said about quarantining for measles, even intelligent and educated persons ridiculing the idea.

Respectfully,

L. J. PONS, *Town Health Officer.*

Feb. 8th, 1896.

*L. J. Pons, M.D., Health Officer.*

DEAR SIR—Replying to your favor of Feb. 6th, would say, that if I was the health officer of a town, into which there had occurred an outbreak of measles in a single family, I would do my utmost to limit the disease to that family, by isolation, placarding and quarantining, in the hope that it had not already been communicated to others by contagion before it was diagnosed. But if such precautions proved too late and the disease had become epidemic, in many families, I would abandon quarantining as a useless and annoying restriction.

I would then depend upon isolation of the patients, placarding the houses, disinfection, and closing the schools. In addition it would be well to caution the public against attending public assemblies, and particularly advising those who live in infected houses to abstain as much as possible from visiting and intimate intercourse with their neighbors. The reason for this is that the disease is contagious in the stage of incubation and before it can be recognized. Hence an effective quarantine

is impossible, unless you shut everybody up in their own houses, which, of course, is not to be thought of.

There is no disease, except smallpox, more contagious than measles. There is no doubt that it (the infection) can be carried in the clothing. But it differs from other strong infections in that the vitality of the infection is not so enduring, and is rapidly destroyed by air and sunlight.

Very respectfully yours.

C. A. LINDSLEY, *Secretary*.

The following letter to Mr. King was written in response to a request by a town health officer, that the State Board would send an expert to investigate the origin of two cases of contagious disease occurring in his jurisdiction :

June 14th, 1896.

*Wm. A. King, Esq., County Health Officer.*

DEAR SIR:—Your favor with enclosure is just received. It is very desirable to investigate every outbreak of contagious disease that occurs in the State and by such information enlarge our knowledge of the means of prevention. But unfortunately such investigations are expensive and not always successful. The limited appropriation to the State Board does not permit of such undertakings in all instances.

The present theory of health administration seems to expect that the local health officer will investigate the minor outbreaks, at the expense of his own town, as the parties chiefly interested, and by whom such work can be performed at least cost. The compensation to them per diem seems to involve that idea. "Not less than \$3.00 per day."

Besides as they are now appointed for a term of years, it is quite reasonable that they should acquire an experience in that kind of official work. I think it is one of the points that the County Health Officers ought to call their attention to and urge upon them as an important part of their official duties.

In regard to the water supply to the school, if you think it is suspicious, I will have Prof. Smith send some sample bottles for furnishing specimens and let him test it.

Very truly yours,

C. A. LINDSLEY, *Secretary*.

DANBURY, CONN., July 2, 1896.

*Dr. C. A. Lindsley, Secretary State Board of Health :*

DEAR SIR:—At a recent meeting of the Danbury Medical Society a committee was appointed to confer with the Committee on Revision of the City Charter in regard to the appointment of a City Health Officer or Board of Health. At present the state of affairs is this : The position of Health Officer is remunerative to the extent of \$200 or \$300 per annum, and this vast sum is so attractive to many of both parties that



it must become a part of party patronage and be distributed where its conversion will net most votes, regardless of personal fitness of the spoiler or of any medical knowledge. As a result of this system we have a change of Health Officer with every change of party, and consequent inefficiency. In place of a good backing of a poor official we have a so-called Health Board consisting of members of the Common Council, and may any year be composed of men who have never served before or given the subject any thought. I make no excuse for applying to you for information. We want to get the best ideas that we can to work on, and any that you may think will be of advantage to us we shall be most grateful for. In replying will you also mention what city of our size has a charter best suited for a model in its department that touches on public health.

Yours very truly,

D. C. BROWN, M. D.

[The Reply.]

July 4th, 1896.

*D. C. Brown, M. D. :*

DEAR DOCTOR:—Replying to your favor of the 2d inst. I would say the charter of your city constitutes the Common Council a Board of Health. That system is a hundred years old. It is worn out, obsolete, a relic of past generations and is utterly inadequate to the requirements of modern sanitary administration. It is sufficient proof that your Common Council have no proper appreciation of the importance of the work that it appropriates only the pittance of \$200 or \$300 as salary to a Health Officer of a city of over 20,000 inhabitants.

Who can be secured to undertake the responsibility of such an office for so large a city except a professional politician, for that salary? And what could be expected from him except the most perfunctory duty unless it be the keeping of the party pledges which were the conditions of his appointment—implied if not expressed? Party politics and sanitary administration are as widely estranged as Jesuits and Methodists. Boards of Selectmen and Common Councils, acting as Boards of Health, have little use in these times except to illustrate their incapacity for good sanitary work. Only in the rarest instances have they given the public what the public could reasonably demand.

Personal responsibility, and tenure of office during good behavior, independence of the popular vote and of party pulls, are essential elements of a successful supervision of the public health by a Health Officer. The Selectmen and Common Council system is in discord with all the above conditions. The last legislature, recognizing these facts, enacted that in every city "some discreet person, learned in medical sanitary science," shall be nominated by the Mayor and confirmed by the Common Council as Health Officer. That he shall receive a per diem compensation of not less than \$3.00 for each day of actual service and his expenses. And in case of failure of the mayor to make such nomination, the County Health Officer shall appoint a Health Officer for such



city. In either case the Health Officer shall be appointed for four years.

The best result of this law is when the mayor neglects to nominate and the County Officer makes the appointment. In the latter case party politics are ignored, or ought to be.

Whatever you attempt to do in the revision of your city charter, put your Health Officer under personal responsibility and give him power and pay commensurate with such responsibility.

Very respectfully,

C. A. LINDSLEY, *Secretary*.

Having been informed that certain articles, deleterious to health, were employed in the manufacture of hats, in some of the shops in Danbury, I wrote to the Health Officer of that city, and requested him to investigate the question. I received the following reply.

DANBURY, CONN., July 6, 1896.

*Prof. C. A. Lindsley, Secretary State Board of Health.*

DEAR SIR :—Yours of the 26th inst. at hand. You will please excuse me for not answering before, but it takes some time to find out the particulars, as they are very reluctant in giving information. I find from investigation that there is a shop in town using acid in the manufacture of hats. Messrs. ——— use sulphuric acid in the proportion of eighteen ounces of acid to about (75) seventy-five gallons of water, and two men stand over the tubs or kettles and size from eight to ten dozen hats a day. In the winter time the windows are all closed and the men are much more affected by the fumes of the acid. Many of the men have the “shakes” so bad that they cannot hold a glass of water in their hand. Some of the men have been under the doctors’ care and one of them is now in a New York hospital from the effects. There is a substance called “carrot” used in cutting the fur from the skins in the fur shops. This “carrot” contains mercury to a large extent and when the fur becomes full of “carrot” the men who work the fur become salivated, have the shakes, and their teeth become loose. When the fur is placed in the boiling water containing sulphuric acid, the combination is injurious to the health of the men working the fur. This is the result of my investigation as far as I have found out, and if I find anything new I will let you know.

Yours respectfully,

WM. HUMPHRIES, *Health Officer*.

No. 9 Stevens St., Danbury, Ct.

P. S. A number of men have been obliged to leave the business for a time to recover from the effects of the materials used.

WM. HUMPHRIES.

Upon receiving the above information from Health Officer Humphries, I addressed an inquiry to the County Health Officer of Fairfield County, asking if there was any statute bearing upon the matter, which it would be his duty to enforce. To which inquiry he replied as follows :

BRIDGEPORT, CONN., July 9th, 1896.

*C. A. Lindsley, M.D., Secretary State Board of Health, New Haven, Conn.*

MY DEAR SIR:—Replying to your favor of the 7th inst., relative to the use of acids and mercury in certain Danbury hat shops, I would say that I saw the article to which you refer, in the County Advertiser, and at the time made some inquiries and examined the statutes with special reference to the matter. I was informed then that the use of the acids and mercury was an unavoidable incident to the “carrotting process” and that the process in the Danbury fur-cutting establishments was not different from that employed in other shops of a similar nature in and out of the State.

I have failed to find any statutory power in the health authorities to enable them to interfere with a business which is conducted with due care, even though the process employed is in its nature extra hazardous. Nor do I find that the general police power has ever been carried to such an extent.

Of course a great variety of occupations are more or less hazardous, and perhaps it is conceivable that one might be so hazardous to the employes that the power of the State could be invoked to prevent them from incurring such a risk. But it seems to me that an employer who hires men who are cognizant of the risk they run, to engage in a hazardous occupation, thereby invades no individual right of his employe, nor does he bear such a relation to the public that he could properly be charged with maintaining a nuisance.

If the employment were one which created or tended to create in the employes a disease which might be communicated to the public, the case would be different.

In consideration of all the facts in my possession, I am unable to reach any other conclusion than that the health authorities would be exceeding their powers in endeavoring either to prevent employers from making use of this unhealthy process, or of preventing employes from engaging therein.

Very truly yours,

GEORGE E. HILL, *County Health Officer.*

NEW HARTFORD, Nov. 5th, 1896.

*Dr. Lindsley.*

DEAR SIR:—To-day complaint is made to me by a parent who has scholars in one of the schools that no kindling is furnished for lighting a fire, but kerosene is poured on the wood, and if the fire does not start

from that, more oil is used until fire is finally communicated to the sodden wood. She said she thought it was unsafe, and that it should be stopped.

I quite agree with the mother in thinking it unsafe, but have I authority as health officer to interfere in the matter.

In the school are no more than ten or twelve scholars. No one is employed as janitor. The larger boys are expected to manipulate the oil and the other children are waiting for the explosion, which is sure to come some day if the practice is continued.

Please give me advice as to my proper course in the case and oblige.

Yours very faithfully,

JERRY BURWELL, *Health Officer*.

Nov. 8th, 1896.

*J. Burwell, M.D., Health Officer.*

DEAR DOCTOR:—You ask if you have the authority to prohibit the use of kerosene oil for kindling fire in a public school-house.

Whether you have or not, you should not wait to inquire in a case of such imminent peril, but assume the authority peremptorily, and take the chances of any one being bold enough to contest it.

Very respectfully,

C. A. LINDSLEY, *Secretary*.

#### RELATING TO SALARY OF HEALTH OFFICERS.

———, CONN, Nov. 4th, 1896.

DEAR DR. LINDSLEY:—The City of ——— pays its health officer \$4.00 per day for services, which last year amounted to \$630.00 for the year. The city fathers think it too much, as years ago under a health committee, (which you are probably aware is a useless body), it cost but \$75.00 a year. Under a health officer the sanitary condition has been wonderfully improved, contagious disease lessened and mortality less; but you know these are not appreciated by the average citizen. . . I wanted to ask the officials for more money to spend to improve certain localities. Will you kindly write me a personal letter giving your opinion as to the importance and value of sanitation, that I may read it before the City Council with other matter which I have.

Thanking you for the favor,

I am sincerely yours,

———, M.D., *Health Officer*.

[Reply.]

Nov. 5th, 1896.

*Dr. ———, Health Officer.*

DEAR SIR:—Replying to your inquiry as to the proper compensation due to a health officer, would say: There is no settled amount even approximately fixed upon in Connecticut, because there is no standard of services required from health officers by which to establish it.

As the business has been done in many places there have been no prescribed duties with which he is specially charged, and generally no one to whom he is responsible. He has accordingly done as much or as little as he pleased, and faithfully taken the meagre salary allowed to him.

The public do not yet appreciate the value of the services of a judicious and capable health officer.

If there is a fire in town, the bells ring, the people shout, the engine is rushed out and the crowd collects, and in due time the fire is put out. The people have seen the whole performance and the firemen did nobly.

If there is a case of contagious disease in town, the health officer is quietly notified. He goes at once to the infected house, gives full and careful directions about all the precautions necessary to prevent the spread of the contagion, and prevents an epidemic. He saves human lives, and an immense amount of sickness and suffering and untold anxiety of friends. But there has been no shouting, no ringing of bells, no crowds of excited people, indeed nobody has done nobly that the people know anything about. The more efficient a health officer is and the less sickness there is in consequence of his successful administration, the less the people hear of him or know of him. And because of the diminished disease and death, the less necessity there appears to the popular mind for the services of a health officer.

——— is a city of over 20,000 inhabitants and ought to give full employment to a first-class officer. He ought to have a first-class standing in his profession and in the estimation of the public. His compensation should be certainly as much as that of Corporation Counsel. His responsibilities are greater, and his duties, if he performs them faithfully, will take as much of his time.

The position of a city health officer is going to be elevated to a more honorable place in the future, in my opinion.

Very respectfully,

C. A. LINDSLEY.

BRIDGEPORT, CONN., Nov. 20th, 1896.

*Dr. Lindsley.*

DEAR SIR:—In making preparation for the Annual Abstract of Vital Statistics, we are at a loss to know how to report still-births. First we have some returned on birth certificates as births, but have no death certificate to correspond. Second, we have more returned as deaths with no corresponding birth certificate, and third, we have some returned of both birth and death, and the question that arises with us is: Shall we report them all under the head of still-births in the table of births, or report each under its own head as births or deaths. Please instruct us and oblige.

Yours, &c.,

GURDON B. LEE, *Registrar.*



[Reply.]

—, Nov. 20th, 1896.

*Gurdon B. Lee, Esq., Registrar, &c.*

DEAR SIR :—In replying to your letter of even date, would say : The practice which has prevailed in regard to reporting still-births, in the "Annual Abstract," has been the following : All still-births are to be reported in both parts of Table I. and are included in the grand total of births. It does not matter in what form they are received by you. The form of the certificate does not alter the fact that they are still-births. They are therefore to be reported as such in Table I.

If the still-birth is reported to you on a death certificate, and if you have issued a permit for burial. I think it is proper that you should record it with your other death certificates, but *in no case is it to be included with the deaths in the "Annual Abstract,"* but in every instance should be placed in the Table I. of still-births, and *in that table only.*

It has been found impossible to get a uniformity of practice among the doctors in the use of certificates. But the Registrars can observe a uniform rule in registration.

If I have not made my meaning clear, please tell me in what respect, and I will try again.

Very truly yours,

C. A. LINDSLEY, *Supt. Vital Statistics.*

November 20th, 1896.

*Prof. C. A. Lindsley, New Haven, Conn.*

DEAR DOCTOR :—The sanitary aspect of a proposal by a local butcher to erect a building in which to keep fowls for slaughter, the building to be in the heart of the village, and within thirty feet of another man's dwelling house, is before me for consideration.

I very much desire to have the inspection of the premises made by some member of the State Board of Health, and an opinion rendered.

I am personally interested in the matter, and any action I might take would not look altogether disinterested, and would probably make much talk unfavorable to health matters generally.

Can you come out here, and if so who pays the expense ?

Very truly,

—, M.D., *Town Health Officer.*

[Reply.]

—, Nov. 1st. 1896.

—, M.D., *Health Officer.*

DEAR DOCTOR :—Replying to your favor of the 20th inst., would say : I suppose it will be possible to keep a building for the purpose mentioned, without detriment to the health of the adjoining residents. I believe by the most scrupulous attention to details, and by unremitting vigilance, it will be possible. So that except from sentimental consid-



erations, no objection could be made to it. I say I believe it *possible*. Therefore I do not believe that you have authority to prohibit the building, or the proposed use of it, until it has proved to be unsanitary. You will have power to abate the nuisance when it occurs, but not in anticipation of its probability.

For the above reasons, I think there is no occasion for an inspection of the premises by a member of the State Board of Health.

Very respectfully,

C. A. LINDSLEY, *Secretary*.

The following letters are printed to illustrate the character of some of the complaints made to the State Board.

———, Ct., Sept. 30th, 1896.

*Dr. C. A. Lindsley, Secretary, State Board of Health, New Haven, Ct.*

DEAR SIR:—The house in which I live is under quarantine when *no contagion exists*. The party with the “alleged” diphtheria has no legal right here. \* \* \* \* The card was put upon the door before any microscopic analysis was made, or careful research for the characteristic organic germ. If such a proceeding is to be allowed then no one's home is safe from infection; the medical attendant says the fellow will *not go to the isolation hospital* and therefore cannot be removed. \* \* \* \* There is a “nigger” somewhere and I am suffering from culpable therapeutic ignorance. I respectfully ask your coöperation to confirm their diagnosis and if an error has been committed I insist the immediate removal of the quarantine. I have the honor to be,

Faternally yours,

——— M.D.

[Reply.]

———, Sept. 30th, 1896.

DEAR SIR:—I have read your communication with interest, and am obliged to say that the State Board of Health has no authority to interfere with the legitimate functions of the local health officers.

The proper rule is, when the diagnosis is doubtful, to protect the public first, giving it the benefit of the doubt, until the diagnosis is confirmed or changed.

Very respectfully,

C. A. LINDSLEY, *Secretary*.

The following was addressed to President Brewer, and referred to the Secretary to answer:

New London, Conn., August 23rd, 1896.

*William H. Brewer, Esq., Pres. etc.*

DEAR SIR:—I beg to call your attention to a public nuisance of a most virulent kind for which seemingly there is no remedy. As attorney for Mr. R. I have prepared papers in the case for a civil suit,

but the law is slow and meanwhile the public are patient sufferers. Briefly the facts in the case are these : A double tenement house and a private residence, containing some twenty-five people, has for use a common sink vault, the contents of which is conducted by a pipe into the public street remaining in a filth pool except as it exceeds its bounds and drains along the gutter. The house is unconnected with any sewer or other receptacle and the contents of the privy drains through the cellar of my client's house and has made it untenable. A house in the immediate vicinity has recently lost four from diphtheria and been under quarantine for some weeks, besides five cases which are under treatment. The owner of the property has been notified to disconnect the pipe by the city board of health, and to clean the privy ; the orders have been obeyed by removing the pipe but allowing the vault to drain into the street as before, by means of natural assistance and the force of gravitation. The city attorney has issued a writ for the violation of the city ordinance (allowing drain matter to empty into the street), but witnesses will not testify against the owner. Our city board of health is a non-paid one and act seemingly in fear of political blackball. The matter is one, I assure you, which demands the immediate action of your body, as the condition existing there is one which is a constant and outrageous menace to the public health. Hoping your body will investigate the facts, I remain.

Very truly,

GEO. C. MORGAN.

[Reply.]

CONNECTICUT STATE BOARD OF HEALTH, }  
SECRETARY'S OFFICE. }

NEW HAVEN, CONN., Aug. 30, 1896.

DEAR SIR :—Your clients are most unfortunate in living in a city which has no just appreciation of the importance of the public health, and makes no adequate provision for its protection and defence.

In the dark ages history tells us that the streets and cities were made the common receptacle of all the filth of the residents, of whatever character, but I did not suppose that any city in Connecticut had perpetuated the practice, or one existed whose sanitary regulations did not forbid such a dangerous relic of barbarous times. There is not a town in Connecticut that could not abolish peremptorily a nuisance of that kind. But in cities the baneful influence of party politics still hampers and often defeats the administration of sanitary laws.

You write, "The matter is one, I assure you, which demands the immediate action of your body." You are a lawyer ; if you will examine the charter under which we act, you will find that we have no mandatory power in such cases, and that our functions are simply advisory.

The State Board of Health extends to you its sincere sympathy, and is ready to throw whatever influence it has in aid of relieving New London of the disgrace of such a filthy condition as you describe.

Under Connecticut laws the power to act in such cases resides in the local authorities. I have the honor to be

Very respectfully yours, etc.

C. A. LINDSLEY, *Secretary*.

REPORT TO THE STATE BOARD OF HEALTH OF AN INSPECTION  
OF A SMALL SWAMP IN THE VILLAGE OF THOMASTON.

In response to a request of Dr. Ferguson, the Health Officer of Thomaston, the undersigned visited that place on Thursday, July 9th, 1896. In company with Dr. Ferguson, we were first driven in a carriage all round a swamp to get a general notion of its location and surroundings, and afterwards, on foot, we made a closer observation of its outlet and its sources of contamination. It is situated near the middle of the village. At a rough guess, it comprises about four or five acres. It is separated from the principal business street only by a row of stores and other business houses. On the high ground surrounding the other sides there are scattered dwellings.

In a sanitary point of view the conditions are as follows : A piece of low, wet land located in the midst of a village population into which by gravity is discharged a large proportion of the sewage from the houses of residents on one side and from stables and business houses on the other. This is a serious source of pollution and we were informed that it was often the cause of very offensive odors.

This low ground receives its water in part from a small stream running into it, but which in very dry weather also becomes dry. But the place is so situated with reference to adjacent water sheds that in heavy rains it becomes rapidly overflowed, and recently was so to the depth of four or five feet, filling also the cellars of neighboring houses. Such alternate conditions of land surface, inundations and drainage and drying by evaporation have long been recognized as among the most unwholesome of telluric influences. When to this is added the prejudicial effects of putrefying sewage, it becomes almost a matter of astonishment that a self-respecting community will continue to tolerate the situation.

In an interview with Mr. Etheridge, the County Health Officer, after making the inspection, it was recommended that the thorough drainage of the swamp was an object that demanded prompt action in the interest of public health, and to that end it

was advised that a sanitary engineer be consulted on the most feasible methods. It seemed quite evident that no serious engineering difficulty existed to prevent a complete draining of the whole wet district and converting it into good meadow land, with the permanent removal of the unsanitary conditions incident to swamps.

Next to this in sanitary importance is the disposal of sewage by methods in accord with recent scientific teaching. As this, too, is an engineering problem, it was advised that it be undertaken, by advice of an expert, as it is not the function of the State Board of Health to direct on questions of that kind.

Respectfully submitted,

C. A. LINDSLEY, } *Members of*  
R. S. GOODWIN, } *St. B. H.*

#### INSPECTION OF A LARGE FILTH POND IN EAST NORWALK.

BY REQUEST OF LOCAL HEALTH OFFICER.

This pond is situated in a thickly settled part of that section of the town, between Second and Third Avenues. It is of irregular shape, with shallow edges, covering something more than an acre of surface and surrounded on every side by buildings among which were fourteen dwelling houses. It occupied the center of a hollow square, and was the receptacle of all the sewage from the numerous families lodged about its borders and of the many domestic animals belonging to them. It was also a tempting dumping ground for garbage and every kind of refuse. It was an enormous open cesspool 200 ft. or 300 ft. in diameter—as a repository of filth and nastiness, in variety and extent not surpassed in any other town in the state. It has no outlet, and it is supplied in part by springs and partly by the watershed of the adjacent land. It is, therefore, subject to the constant alternations, at its shallow borders, of being sometimes covered and sometimes exposed. It is a bacteriological laboratory, for the culture of germs of immense proportions.

The Health Officer told me that he had done all that he could do to have it abated, urging the Selectmen to avail themselves of the power which the law gives them to abate it, but without any result.

Respectfully submitted,

C. A. LINDSLEY, *Secretary.*



SOUTH NORWALK, CONN., May 13, 1896.

Dr. C. A. Lindsley.

DEAR SIR :—I would like to have you visit South Norwalk ; there is nothing that needs immediate attention ; it is a nuisance of long standing. If you will fix a time convenient to you, and let me know the train you arrive on, I will make arrangements for you.

Yours, &amp;c.,

G. A. KENDALL, *Health Officer*.

## REPORT OF THE INSPECTION.

May, 1896.

G. A. Kendall, *Esq.*

DEAR SIR :—The inspection on May 15th, 1896, of the locality in the rear of Day St., South Norwalk, presented an extremely unsanitary condition. The ground is naturally low, and so far as I could see the drainage was completely obstructed by the embankment forming the street from Day street west. At the same time it was greatly contaminated by several privy pits, poultry yards, kitchen garbage and other sources of sewage products, from the adjacent houses. Under existing conditions the present evils will be inevitably progressive from bad to worse unless something is done to prevent. The only radical relief is by drainage and providing means for the removal promptly of all the refuse and sewage of the place.

That work is an engineering question and I leave it to engineers to settle. But I wish it to be distinctly understood that I mean *removal* of the sewage, *prompt removal*, no *ground storage*. There is no excuse or apology on any sanitary principles for a cesspool, or a privy vault, which Waring speaks of as "the nuisance and death-dealing cesspool, which is, *facile princeps*, the great sanitary curse of the country."

About Bouton and Hoyts streets in Whistleville there is also an urgent demand for better drainage. The necessity for it is so very conspicuous that there is no need of an expert to point it out. The method of drainage is for the engineer to devise rather than the sanitarian.

Very respectfully,

C. A. LINDSLEY.

## INSPECTION AT SOUTHBURY.

At the request of Mr. W. H. Wakelee, Health Officer of Southbury, I went on the 23d of July to inspect a pond which from disuse of the factory, for which it had been artificially produced, had become stagnant and at times emitted unpleasant odors. A school-house stood upon the bank and the privy vault connected with it, located on the steep side hill, discharged its contents directly into it. A barn and the privies of some private dwellings were also so situated that the pond received their drainage.



Two means of improvement were available : one by removal of dam and diverting a stream of water through the place, and the other by grading the high ground on the sides of the pond into it and so obliterating it.

The latter would be the more expensive but the more effectual remedy.

Very respectfully submitted,

C. A. LINDSLEY, *Secretary*.

#### RELATING TO A POLLUTED ICE POND.

HARTFORD, CONN., July 23, 1896.

C. A. Lindsley, M. D., *Secretary State Board of Health* :

DEAR SIR :—In West Hartford there are several houses from which the water closets drain into the nearest stream from which ice is taken, a half a mile more or less below, for use in Hartford. There are also other houses being built on the banks of the stream.

The parties seem willing to do what is right, but what is the right thing for the property owners to do, (within a reasonable sum) the Health Officer is in doubt.

Would it not be best for you and Mr. McKenzie to go to West Hartford, look over the ground, see the parties and advise in the matter? If you decide to come I will notify the parties to meet you. The Health Officer of West Hartford will take you over the grounds.

Yours very truly,

DANIEL A. MARKHAM,

*County Health Officer.*

#### REPORT OF THE INSPECTION.

August 4th, 1896.

Daniel A. Markham, Esq., *Health Officer* :

DEAR SIR :—Mr. McKenzie and myself, in company with Health Officer Dr. McLean, visited the residence of Mr. J. M. Foot and vicinity to-day to inspect the methods of drainage and consider whether or not it might be a source of pollution to the ice pond located in West Hartford. We were told that the brook running through the immediate neighborhood afforded a part of the supply to the ice pond, the distance, as the brook ran, being estimated at from two to four miles.

In addition to the drainage from Mr. Foot's house and barn, this brook receives the sewage from three other houses by private sewers, which discharge very near to its banks. Still another house not yet completed or occupied, we were told, will construct a cesspool on a steep side hill, not twenty-five feet from the brook.

The situation is extremely simple. There are five dwelling houses, four of them quite new, and a barn for the keeping of horses and cows, from all of which, under present arrangements, as made or intended, this brook will be used as a common open sewer.

In the present light of sanitary science there can be but one opinion, viz: That a small body of water contaminated to that degree must be an unsafe source of an ice supply. There can be scarcely less doubt that it will be an unwholesome drink for the cattle in the pastures through which the brook flows.

In view of the foregoing facts, the undersigned are of opinion that the pond to which said brook is tributary will be so much polluted by the sewage from the aforesaid houses and barn, that the ice will be unsafe for domestic use. The water for an ice supply should be as pure as for drinking purposes.

There are other means of sewage disposal by which contamination of the brook can be avoided, but they are more expensive. It is not considered to be one of the functions of the State Board of Health, or of other health officials, to devise plans of sanitary engineering for private houses. We therefore gave no instruction for other ways of disposing of their household wastes. That would properly be the business of an expert in that line of work.

As to the duty of the Town Health Officer in this instance, it will be to do one of two things; either to forbid the pollution of the brook or prohibit the sale of ice so dangerously contaminated.

As either of these courses seemed to involve some legal questions, the undersigned respectfully referred him to his County Health Officer for further instructions.

All of which is respectfully submitted.

C. A. LINDSLEY,	} <i>Members of the Connecticut</i>
T. H. MCKENZIE,	
	} <i>State Board of Health.</i>

#### CAMP COFFIN.

By request of Quartermaster-General Cheney I visited on Saturday, August 1st, the State Camp grounds in company with Prof. H. E. Smith.

We were met on the grounds by Surgeon General Bowen, and other officers.

The object of the visit was to inspect the water supply.

The source is from about thirty driven wells in the camp.

After the encampment last summer a somewhat extensive outbreak of typhoid fever occurred among the members of two companies using the same well.

An examination showed that the well might easily be polluted by the drainage from the tub under the spout of the pump, and which tub was used for various laundry purposes besides the ordinary ablutions of the person. This possibility was mentioned in the report of an inspection of the camp during the encampment in August of the previous year. In that report it was stated that the wells were in a dangerous condition.

The construction of a sewer from all the pumps to receive the waste water would be an expensive undertaking, and the time before the encampment would begin was too short to complete it.

It was concluded that a water-tight pipe be attached to the pump spout to conduct the water to a tub some twelve or fifteen feet distant, thus making the filtration through the ground before reaching the well water sufficient to purify it.

It was also concluded best to make an analysis of the water from the different pumps before the encampment began and again after its conclusion.

Respectfully submitted,

C. A. LINDSLEY, *Secretary*.

The following report of an inspection is self-explanatory :

September 23d, 1896.

The undersigned, members of the State Board of Health, respectfully beg leave to submit the following communication to the Board of Health of the city of Bridgeport.

Having been solicited by Alderman O'Rourke and other citizens of Bridgeport to inspect the sanitary condition of a part of Union avenue and vicinity, we visited this afternoon the locality in company with a number of interested residents.

We were shown five or six small dwelling houses standing on the easterly side of the street adjoining each other. In front of each of them and under the sidewalk, we were told, a cesspool had been constructed into which was received all the sewage of the houses, including that from the water closets in the said houses. These cesspools were all filled to overflowing, as was readily proved by starting the water in either house, upon which from the cesspool immediately in front would issue a flow of filth into the gutter along the curb, already partly filled with the same vile material. The stench from this source was intolerably offensive, even as far as the corner of the next street.

On the same street and adjoining this row of dwellings is a large building occupied as a school house, in which 700 children are said to be in attendance. The proximity of this school to this public exhibition of stinking nastiness, monstrous beyond parallel in modern times, insures a constant pollution of the atmosphere of the school and its vicinity. It is a dangerous experiment to subject 700 children daily to such an exposure. The

modern laws of health would demand that the school be closed until this disgraceful abomination shall be abated.

Respectfully submitted,

C. A. LINDSLEY. } *Members of the*  
N. E. WORDIN. } *State Board of Health.*

#### A SUSPECTED CASE OF YELLOW FEVER.

On the 8th of Aug., Dr. Ferguson, Health Officer of Thomaston, asked my advice by telephone as to the probable cause of death of one of his patients, detailing the facts as follows: Mrs. Y. had recently returned from a journey in which she had visited at New York, Brooklyn and Newark. Soon after arriving home was taken violently ill, high fever, intense headache, black vomit, jaundice and death. I advised that the precautions should be rigidly observed, that would be proper in a case of yellow fever.

I then sent the following telegram to New York:

Aug. 8, 1896.

*To Emmons Clark, Secretary of Health Department of New York City.*

A death at Thomaston yesterday. Suspected yellow fever. Recently from New York City. Is there any source of infection known to exist, lately, in New York or vicinity.

C. A. LINDSLEY,  
*Secretary of Conn. State Board of Health.*

[Reply.]

New York, Aug. 8, 1896.

*To Dr. C. A. Lindsley, Secretary State Board of Health, New Haven, Ct.*

Health Officer Doty says there is no yellow fever in New York, Brooklyn, or at Quarantine and has not been. He suggests an autopsy on reported case at Thomaston.

EMMONS CLARK, *Secretary.*

The following statement by Dr. R. S. Goodwin, taken in connection with the recent visit of the patient to New York, and elsewhere, and without information about the presence of yellow fever there, fully justified the suspicions. Yet in the absence of any possible source of infection the true diagnosis was probably a malignant malarial attack.

"I was called to see Mrs. Y. in consultation with Dr. Ferguson Friday morning last. She had been confined to her bed less than 48 hours. I found her unconscious and in a state of collapse, in which she died half an hour later. Her skin was of a deep yellow hue and there were patches of livid color on her nose and body. The spots were



caused by capillary hemorrhage under the skin. I obtained from the physician in charge, and the nurse, the following details of the history of the case, which I believe to be truthful and accurate. Her first symptoms were great lassitude and supra-orbital pain. She had at first a very severe chill, lasting several hours, which was followed by high fever and severe nausea and vomiting. The temperature reached the height of  $106\frac{1}{2}$  degrees, but subsided during the collapse. The matters vomited were at one time of a dark or blackish hue. She had only one paroxysm, terminating in collapse and death. The yellow hue came on rapidly within three hours previous to her death. The tongue was slightly coated, eyes humid, highly injected, with pupils contracted. The hands were clenched. She had positive evidence of hemorrhage of an internal organ. There was also obstinate constipation, and I noticed a peculiar and highly offensive odor. This was the group of symptoms presented to me for diagnosis. I think that anyone qualified to judge will say that they present an accurate picture of a case of yellow fever, with no important symptom wanting. The single paroxysm, followed by collapse and sudden death, the intense and rapidly developed jaundice (yellow color) and the distinct hemorrhagic tendency, were the notable and strong points differentiating it from bilious remittent fever, which otherwise it would have been proper to call the disease."

#### REPORT ON THE FRANCISCO DAIRY AT FAIRFIELD, N. J.

NEW HAVEN, CONN., June 1st, 1896.

##### *To the State Board of Health.*

Being in South Orange, N. J., at this date and hearing much of the superior quality of milk furnished from Mr. Francisco's dairy, I drove with a friend to make some inquiries and a personal inspection of the premises. The place is about 12 or 14 miles from Newark in a northwest direction, and about two miles from the birthplace of President Cleveland.

We reached there about 11 o'clock A. M., at a time, of course, when milking would not be going on.

We were courteously received and offered every facility for inspecting the buildings, the manner of caring for the cows and the preparation of the milk for market.

The cow stables are located on elevated ground several hundred feet distant from the highway and from the dairy house. The stables are above ground, well ventilated and constructed with regard to the prompt and easy removal of all the droppings from the cattle. They are fed chiefly in their stalls; which are ingeniously contrived to give them a free movement of their heads. The cows are allowed in the open air only about three hours a day, in good weather. They receive some ground corn and malt sprouts mixed, but their food is mostly fresh mown



half grown rye, oats, corn or grass in the summer, twice a day, and hay once. And in the winter ensilage is mostly the substitute for the green fodder.

In all the management of the business there is apparently one principal object in view, and that is the most absolute cleanliness in regard to the milk. The chief aim seems to be to prevent any possible contamination of the milk during its passage from the udder of the cow to its hermetical enclosure in the bottles, to be distributed to consumers.

The men engaged in the milking are required to render their hands aseptic by the most thorough washing and brushing. They are required to wear a clean white linen suit, which we were told was washed twice a week. All the utensils are kept sterilized by steam. The milk is received from the cows in pails covered with a fine strainer. The milk is strained again several times. From the pails it is poured into large cans and transported on a wire trolley to the dairy house. It is immediately passed over a system of water-cooled pipes and the temperature reduced to 52°. Then without delay it is, by rapid mechanical contrivances, poured into sterilized bottles and hermetically sealed. In this condition it is sent to consumers.

By these precautions and the rapid cooling of the milk and immediate bottling at a place remote from the atmosphere of the barn, there would seem to be the minimum of exposure to sources of external pollution. It is simply cows' milk cooled and bottled as expeditiously as possible, and guarding it in the process at every step from the chance of contamination.

The cows are regularly inspected by a competent veterinary and every attention is given to their hygienic surroundings. They are daily groomed like horses. Their teats are washed and wiped dry before milking. The result is merely clean milk.

Respectfully submitted,

C. A. LINDSLEY.

## VACCINATION.

An English Commission has just completed its Report on the Merits of Vaccination and Re-vaccination. The great importance and interest of the subject justifies the introduction here of some extracts from a review of the Report, published in "Nature."

The report of the Royal Commission on Vaccination is one of

the most moderate, and certainly one of the most convincing that has come from any Royal Commission during recent years. The Commissioners have, for seven years, been occupied in making most careful inquiries at all sources as to the efficacy of vaccination in rendering children (and adults) less susceptible to infection by small-pox virus. No trouble has been too great, and no expense has been spared to obtain accurate information as to the truth of statements made by the witnesses who appeared before the Commission; as to the trustworthiness of figures placed in evidence; as to the nature of the disease alleged to be due to vaccination; and as to the exact share that legal compulsion has had in promoting or preventing the vaccination of children. The conclusions at which the Commissioners have arrived are evidently based on the most thorough conviction that the evidence before them, after the careful sifting through which it has gone, is to be thoroughly trusted, whilst their recommendations as regards the alteration in the methods of operation, registration, and legal compulsion certainly appear to be those best calculated to increase the efficiency of vaccination, concerning the value of which they are so thoroughly convinced.

The main considerations of the Commission are arranged under a series of headings.

(A) "As to the effect of vaccination in reducing the prevalence of, and mortality from, small-pox." Here they conclude "(1) that it diminishes the liability to be attacked by the disease; (2) that it modifies the character of the disease, and renders it (*a*) less fatal, and (*b*) of a milder or less severe type; (3) that the protection it affords against attacks of the disease is greatest during the years immediately succeeding the operation of vaccination. It is impossible to fix with precision the length of this period of highest protection. Though not in all cases the same, if a period is to be fixed, it might, we think, fairly be said to cover in general a period of nine or ten years; (4) that after the lapse of the period of highest protective potency, the efficacy of vaccination to protect against attack rapidly diminishes, but that it is still considerable in the next quinquennium, and probably never altogether ceases; (5) that its power to modify the character of the disease is also greatest in the period in which its power to protect from attack is greatest, but that its power thus to modify the disease does not diminish as rapidly as its protective influence against attacks, and its efficacy during the later periods

of life to modify the disease is still very considerable ; (6) that re-vaccination restores the protection which lapse of time has diminished, but the evidence shows that this protection again diminishes, and that, to ensure the highest degree of protection which vaccination can give, the operation should be at intervals repeated ; (7) that the beneficial effects of vaccination are most experienced by those in whose case it has been most thorough. We think it may fairly be concluded that where the vaccine matter is inserted in three or four places it is more effectual than when introduced into one or two places only, and that if the vaccination marks are of an area of half a square inch, they indicate a better state of protection than if their area be at all considerably below this."

"It is evident from the statistics given that the protection afforded by vaccination against small-pox, though lasting for some time, is gradually lost, so that there comes a period when the protection is very slight indeed ? Re-vaccination is naturally the first remedy that suggests itself to meet this difficulty, and from the evidence collected by the Commissioners from the various epidemics that have occurred and from the vaccination statistics of the various public services, it is made very apparent that the value of re-vaccination as a preventive of small-pox can scarcely be overestimated. The proof of this is so conclusive, especially where it is based on the observations made on the ordinary staffs of hospitals, nurses, and the like, who are brought into close contact with small-pox patients, that the re-vaccination statistics alone are sufficient to prove the value of vaccination."

(B) "As to the objections made to vaccination on the grounds of injurious effects alleged to result therefrom ; and the nature and extent of any injurious effects which do, in fact, so result."

In regard to this they say "a careful examination of the facts which have been brought under our notice have enabled us to arrive at the conclusion that, although some of the dangers said to attend vaccination are undoubtedly real and not inconsiderable in gross amount, yet when considered in relation to the extent of vaccination work done, they are insignificant. There is reason further to believe that they are diminishing under the better precautions, of the present day, and with the addition of the further precautions which experience suggests will do so still more in the future." The remedy for this, apparently, is the employment of calf lymph, which would wholly exclude the risks as regards

both syphilis and leprosy. The second danger does not concern the British public, whilst the risk of syphilis, although real, is an exceedingly small one, even when humanized lymph is employed, and could probably be wholly avoided by care in the selection of the vaccinifer.

As regards erysipelas, eczematous eruptions, and vaccina maligna, calf lymph vaccination appears to have few advantages over arm to arm vaccination. . . . .

One remarkable fact in connection with this part of the question is that even the minority reporters against vaccination (only two in number, although at least four members of the Commission were supposed, originally, to be averse to its use) can offer no new light on the question; any argument brought forward, in a half-hearted fashion, against the efficacy of vaccination, is based not so much upon actual statistics as upon a purely hypothetical basis.

The alternatives, improved sanitation and isolation, that are advanced in the minority report as being sufficient to take the place of vaccination, were of no avail during the Gloucester epidemic, during which vaccinators and non-vaccinators alike competed with each other in their zeal to have vaccinations and re-vaccinations performed at as early a date as possible; only as the population became well vaccinated did other measures appear to have any material effect in limiting the spread of small-pox.

The Commissioners believe that the case for vaccination is so strong, that when their report is made public, and when people have had time to digest its contents, especially if the stimulus of alleged martyrdom be removed, that much of the opposition to vaccination will disappear, and that compulsory vaccination will no longer be necessary.

Two of the Commissioners, although maintaining that isolation and improved sanitary administration are sufficient to cope with the disease, nowhere lay down as a proposition that vaccination affords no protection against small-pox.

After a careful perusal of the report we are convinced that, although the Commission has taken seven years during which to sift evidence and make its report, it has, both from the momentous issues at stake, and by the judicious nature of its finding, been thoroughly justified from beginning to end, and that the report will be accepted as one of the best ever presented to our, or any other, parliament.—*Nature*, November 5th, 1896.

REPORTS

OF THE

COUNTY HEALTH OFFICERS.



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## ABSTRACTS FROM THE REPORTS OF THE COUNTY HEALTH OFFICERS.

Section 4, of the Medical Practice Act, requiring County Health Officers to keep a full record of their doings and to make report thereof annually in the month of June, to the State Board of Health, was promptly complied with by all the County Health Officers, except of Middlesex County.

Very full abstracts of these reports are here published. They indicate a steady improvement in the sanitary administration of the State, due to the adoption of uniform methods of work, and to the greater experience of health officers, acquired by longer tenure of office.

### REPORT OF HARTFORD COUNTY HEALTH OFFICER.

*To the Honorable State Board of Health of the State of Connecticut:*

In pursuance of my duty as County Health Officer of the County of Hartford, I hereby submit a report of my doings for the year ending May 31st, 1896.

I know of no better way to give you a general knowledge of the daily duties of the office than to submit the following table, showing the number of consultations, individual letters, circular letters, days out of town, and days devoted to work on vital statistics. The table does not give the whole number of consultations or the whole number of letters, for of many short consultations and letters I have made no account in my books.

	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	Total.
Number of Consultations.....	28	14	7	12	7	10	4	5	6	11	23	10	137
Number of Individual Letters.....	15	47	40	40	58	67	17	42	56	35	39	12	468
Number of Circular Letters.....	about five hundred.												500
Number of days out of town.....	8	10	4	8	3	7	1	8	8	4	6	8	75
Number of days on Vital Statistics.....	0	0	.9	0	0	1	3	6	7½	2	2	4	34½

Besides the every day duties indicated in the table, I would call your attention especially to the fact, that during the year I have prosecuted five persons for maintaining nuisances dangerous to the public health, and that each person prosecuted was convicted.

I called two meetings of the town health officers of Hartford County during the year. At one meeting the subject of sewers, their construction, etc. was discussed, and much practical information was given by T. H. McKenzie, Civil Engineer. As a rule the meetings were devoted to the discussion of questions which had arisen in the duties of the officers in different towns.

During the past year I succeeded in having a portion of the village of Warehouse Point organized into a fire and sewer district, under the general statutes, and a sewer system has been built there. I think every house on the line of the sewer was connected with the sewer. I am informed that the residents within the district are decidedly pleased with their sewer system, and that the people in the village, outside of the sewer district, now regret that the district does not include the part of the village in which they live.

In the organization of the fire and sewer district much credit is due to Mr. Simonds, the owner of a silk mill and much real estate within the district, and to Dr. Sellev, the town health officer, and to Mr. Barnes, a resident.

In Windsor Locks, a very compact village of three thousand inhabitants, no public sewer system has yet been adopted. The town in a large portion of the village has built drains for the purpose of taking the water from the streets. These drains empty into the most convenient places for disposing of the water so it will not injure the streets or private property. They were not intended for sewer purposes. Yet the sewers from many houses along the line of the drains have been connected with the drains. As a result, increasing nuisances are being made at different places where the surface drains empty.

The town health officer and many of the citizens of Windsor Locks recognize that this condition cannot be continued, and are exerting themselves to get a public sewer.

I consider the sanitary condition of Windsor Locks worse than that of any other town in the county.

In the borough of Bristol an extensive sewer system has been finished during the past year. It was built under the superintendence of T. H. McKenzie, Civil Engineer, which fact insures it to have been built upon most thorough sanitary principles.

The town health officers in this county have kept a careful supervision over the ice used for domestic purposes in their respective towns, and the sale of ice for domestic purposes considered dangerous to public health has been prohibited.

The town health officers in this county have, ever since their appointment, attended to the sanitary condition of school-houses and their surroundings. Where they have deemed it necessary they have caused them to be cleaned and disinfected.

I have examined the vital statistics in the 29 towns of this county, and efforts have been made, which are uniform in all the counties of the State, to perfect them. Decided improvements have been made, and we have reason to believe that before many years we shall see the letter and spirit of the law relating to vital statistics complied with.

I think it is a duty owing to the people of the State, that the sources from which ice is obtained for domestic purposes should be placed more strictly under the control of the State Board of Health, and if the subject should be brought to the attention of the legislature, I think it would pass a law which, if enforced, would insure purer ice for domestic purposes.

Very respectfully submitted,

DANIEL A. MARKHAM,

*County Health Officer of Hartford County.*

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#### REPORT OF NEW HAVEN COUNTY HEALTH OFFICER.

*To the Honorable State Board of Health, New Haven, Conn.*

I respectfully submit to your Honorable Board the following report of my doings as County Health Officer for New Haven County for the year ending June 1st, 1896.

I will endeavor to include herein enough of the work to enable you to form a general idea of what has been accomplished during the year.

The number of complaints received and investigated exceeds that of last year, there having been reported to me by the town health officers two hundred and thirty-five cases, all of which have been investigated. This number, of course, is from the towns of New Haven County, and from those boroughs that are within my jurisdiction, under Chapter cxlv, Public Acts of 1893. These complaints have been very diverse in character. They have been made in some instances where the nuisance could interfere only with the inhabitants of a certain street or section of a town, while in other cases the nuisance complained of would affect whole towns and, in two instances, the residents of a city.

The rules, as originally adopted by the town health officers, required that all complaints should be in writing. This regulation has proved to be an effective safeguard against such complaints as used to be the frequent outcome of some personal and private grudge, but it has often appeared that nuisances exist, and are brought to the attention of the town health officer, without any written complaint being made, so I have advised the health officers in this county to examine every case, no matter how they get their information, and if a nuisance exists to have the same abated. To demonstrate the success with which the law is being carried out, I will cite a couple of the more important cases in which nuisances have been abated :

In the fall of 1895, a complaint was made that Mr. Coghlan, who had a factory in Waterbury for the rendering of grease, bones and waste from slaughter houses and meat markets, was conducting his business in such a manner that it was a nuisance and injurious to the public health. At the request of the town health officer, I attended the hearings upon the matter. Both parties were represented by counsel. The testimony offered to the town health officer showed conclusively that there was cause for complaint. Expert testimony was introduced, to explain the effect upon the health of the public of such a condition of things as the evidence proved to exist. The hearing occupied four days, and after all the testimony had been taken, the town health officer, with the counsel representing each side, visited the factory. The health officer decided that the factory, conducted as it had been and causing the pollution of the atmosphere by foul and noxious odors, was a nuisance, and ordered the factory closed, allowing the proprietor two weeks in which to move his business. An appeal taken from the order was withdrawn before it could be heard, and the factory was closed.

Another case which I desire to mention is that of a similar nuisance that was abated in Meriden. This was a case where certain premises had been used, for ten years past, for extensive butchering purposes, the average number of hogs daily killed there being probably from 75 to 100. All the refuse from these premises was washed down, every day, into a brook which flowed through a section of the city of Meriden, and as the land that formed the bed of this stream was very swampy there had been deep holes formed in the bed of the brook which were completely filled with decaying animal matter, and as the water passed these places



much of this putrifying refuse was carried along, and the stench was unbearable.

When complaint was made to the town health officer, the latter made a prompt and thorough investigation. At his request I visited the site of the alleged nuisance, with him, upon three different days. The town health officer issued an order to the proprietor of the slaughter-house, that the latter must abate the nuisance by keeping the refuse out of the stream. Immediately upon receipt of this order, the proprietor placed in the building the most approved machinery adapted to prevent the cause of the nuisance, and no complaints have been made since this machinery has been in operation.

I cite these instances so that your Honorable Board may know what is being done, for while the nuisances of which complaint is made are, in many instances, such as the town health officer can decide upon immediately and without much trouble, others are complicated, and require the closest investigation and carefully considered action, in order to effect the abatement of the nuisance, if one is found to exist, without the expense of a protracted suit in the courts. It will also be noticed, from these cases, that the public, as well as the individual, when it fully understands the law, gives its assistance to the authorities and coöperates with them.

There have been seven appeals from orders of town health officers, all of which have been heard by me; and with one exception, the decision of the health officer has been sustained. It has been my experience in these cases that when the defendant finds he is really maintaining a nuisance, or rather realizes that he is doing upon his property that which endangers the health of the community, he willingly removes the cause of danger, and, in no case, have I been obliged to resort to that provision of the statute which provides for the bringing of an action in the name of the State to prevent the continued violation of an order issued by a health officer. The provision allowing an appeal from an order of a town health officer gives the appellant an opportunity to produce evidence to prove that he is not maintaining a nuisance, and it is often taken advantage of by those who wish to present their side of the case more fully, or by persons who imagine that the local health officer is improperly influenced by the complainants. It is possible that an appeal is sometimes taken to gain time, but I think the provision allowing such an appeal is a wise one. In the two

hundred and thirty-five cases investigated, the nuisance has been abated when found to exist.

In the summer of 1895, many complaints were made by residents of different towns as to the condition of lakes, ponds and streams from which ice is gathered every season, and the town health officers were advised to make a thorough investigation of the ice supplies in their respective towns. It was discovered that in New Haven County there were several places where the ice was taken from a pond or lake into which a sewer emptied, or from a river or stream within two miles below the outlet of a sewer entering the same. In many of the towns the sanitary conditions were immediately changed by the removal of closets, the changing of drains and the abolition of such causes as in the opinion of the health officer would contaminate the supply of ice. In the towns first mentioned the ice companies, when notified as to the law, responded immediately that they did not sell for "family or hotel use" the ice cut from those sewer-fed rivers, ponds or lakes, but that it was sold exclusively for storage purposes. Of course the health officers could do nothing further under the present law. From the reports that have been received at this office from individuals, I know that this work of the town health officers in protecting the ice-consumers was appreciated; and with the assistance of the citizens, the ice supplies of this county may be so well taken care of and watched as to insure the sale of pure ice in every town, city and borough.

There have been only two meetings of the town health officers since my last report, but I now intend to return to my original practice of having quarterly meetings of these officers held during the coming year, as I believe such meetings are necessary to insure the most effective work under the present law. Questions are constantly arising which call for the concerted action of the health officials and opportunity should be given for the submission of many of these questions to the Secretary of the State Board of Health.

The local health officers have made a special effort, throughout the past year, to enforce the rule regarding the reporting of contagious diseases, and violations of this rule, where evidence could be obtained to prove the infraction, have been reported to this office. In September, 1895, I received a communication from the health officer in Wolcott, stating that a physician, residing in Waterbury, had failed to report a contagious disease, and I was

asked to prosecute. I went to Wolcott on the 24th day of September, 1895, and tried the physician, who was found guilty and fined. In Waterbury, a physician has been arrested and tried before the Police Court for failure to report to City Board of Health a case of diphtheria. The result of these prosecutions, and of several others that I might report to you, has been to bring about a stricter compliance with the law as to reporting such cases. We have not succeeded, however, in securing complete compliance with this rule. The public does not seem to appreciate the importance of reporting contagious diseases, but there is an improvement in this matter; and the physicians as a rule, not only report to the town health officers, but coöperate with them in maintaining quarantine when necessary. The town health officers have also endeavored to bring about a more thorough observance of the rules as to quarantine in the case of contagious disease. I have brought no prosecutions against persons who violated the town health officer's rules in these cases, though several have been reported. In many instances a letter written from this office has prevented a further violation of the law.

I have received reports from the town health officers of the work done by them during each month, and I have succeeded in securing from them complete monthly reports to your Honorable Board for the past five months. There is a health officer for each city, borough and town in New Haven County. I have visited the boards of health in the cities and boroughs of the county, with one exception, and have been cordially received by them, and have been asked, several times, to assist and coöperate with them, a request which I am always glad to grant. This coöperation of the boards of health in the cities and boroughs with the county health officer, is doing a great deal toward effecting a uniform enforcement of the laws relating to public health, and is making the health officers of the cities, boroughs and towns one perfect system, through and by which the laws are enforced and carried out. In one instance, however, when I sought to coöperate with a city board of health, the latter referred the matter to its legal adviser, and was advised that it did not come within the provision of the Act of 1893, and that my coöperation or supervision would be unauthorized, and so we have been deprived of the valuable assistance which its coöperation would give to the system in this county. I am in hopes that, notwithstanding the position this city board has taken, the time will come when all

the health authorities in New Haven County, *without a single exception*, will be working for the one purpose, to wit, a strict enforcement of a uniform system of laws, rules, and regulations relating to the protection of the public health.

I have received several complaints about physicians said to be practicing medicine in New Haven County in violation of the law. There has been one prosecution, the result of which was a conviction and binding over to the Superior Court, where the case was settled with the State's Attorney. In some of these cases I found the person complained of had registered in another county and had removed here. I have also investigated other cases where unregistered parties were practicing, but it was impossible to obtain evidence that would convict.

During the past year I have been frequently called upon to advise the health officers as to the legal side of questions arising in the administration of their duties, and this part of my work is gradually increasing. I find I have written more letters and had more personal consultations during the last year than in the year preceding.

In addition to the duty imposed by statute upon the county health officer, that he shall cause the execution of the laws relating to public health and the prevention and abatement of nuisances dangerous to public health, etc., to which part of my work I have devoted the preceding portion of this report, the statute directs that he shall "cause the execution of the laws relating to the registration of Vital Statistics," and have the power of a grand juror in each of the several towns within his county to prosecute violations of the law. This portion of my work has been a prominent part of the duties performed during the year. I have notified all persons, who had failed to comply with the registration laws, that they would be expected to live up to them, I have been forcing a complete compliance during the past year, and have brought some prosecutions.

The returns of birth certificates have been made promptly, as a rule, the past year. The improvement in this part of the Registrar's work is very marked. Excepting the name of child, in many cases, the certificates are generally complete. I have prosecuted one physician, who returned his certificates semi-annually, and have issued a warrant for another, who made all his returns for 1885, in December of that year, thus being guilty of twenty-eight distinct violations of the law. It is hoped that it



will not be necessary to institute any more prosecutions, but that the physicians will comply with the law in the future.

I found, as I stated in my last report, that the undertakers made out the death certificates, taking them to the attending physician for his signature. As this practice made many errors, I notified each undertaker in the county that hereafter I should insist upon the certificates of death being made out by the physician. My action caused a great deal of comment and adverse criticism. One undertaker, who does a large business in one of the cities, came to my office, and was very indignant that such an order should have been sent to him, claiming that he had never violated the law, and that he was very particular about having his death certificates properly filled out. I told him that there could be no exception, but that he would have to do the same as the others. Some weeks later I discovered that the gentleman above mentioned had an arrangement with the Registrar of his town whereby the former always had a removal permit at his store, signed in blank, so that when he wished to remove a body, he could fill in the blank, and immediately take the body away, thereby committing a violation of the law. While the Registrar admitted the fact, I could not prove a definite case against the undertaker, and did not prosecute, but the practice was immediately stopped. The sextons in the smaller towns do not comply with the law as to monthly returns of burials, but the practice in this regard is rapidly improving. In the cities and boroughs the law is promptly complied with. I found in Meriden, that a certain undertaker there, who was also sexton of one cemetery, had made no report of burials for the whole year. I reported the case to the city attorney, who declined to prosecute, but the latter notified the undertaker that I had made complaint, and that if the law were not fully complied with in the future, prosecution would follow without further notice. I have prosecuted one sexton and one undertaker for the burial of a body without the permit required by law. Both these cases were settled by payment of the minimum penalty with costs.

The clergymen, judges and justices of the peace, officials who may, in this State, legally join persons in marriage, are generally prompt in making returns to the registrars. Some difficulty has been experienced in getting returns from the Jewish Rabbis, who cannot read the language, and who did not understand that it was necessary to make return of marriage, but this will be



overcome, as they now understand their duty. Section 2789 of the Statutes reads as follows : — “All judges, justices of the peace, and ordained or licensed clergymen belonging to this State, or any other State, *“so long as they continue in the work of the ministry,”* may join persons in marriage ; and all marriages attempted to be celebrated by any other persons shall be void ; but all marriages, which shall be solemnized according to the forms and usages of any religious denomination in this State, shall be valid.” It has been difficult to determine when a man ceases to be engaged in the ministry ; in other words, the question arises, is a man, once ordained or licensed, *always* within the law, whether or not actively engaged in the ministry, that is, in charge of a congregation or parish ? Persons are joined in marriage in this county every year, by men who were formerly active in the work of the ministry, but who have become aged and given up active work. Is such a marriage legal ?

The person performing the ceremony frequently omits signing the certificate in his official capacity. This is, as it seems to me, an error, in view of the decision in Vol. 61 of our Supreme Court, which states : “There is no law against using abbreviations, though their use is to be deplored in formal documents.” I am satisfied that nearly all the violations of the registration laws are the result of carelessness, but in some instances I have found what appeared to me to be an intentional neglect. All such cases have been, and will be prosecuted. I shall send a letter to each clergymen, judge and justice of the peace in this county, calling his attention to this point, and advise the registrars not to accept a marriage certificate, unless the person making the return shall sign name and describe in full his official character.

During the year I have prepared and sent out to every physician in this county a letter, calling his attention to the law, so that none could plead ignorance of his duty, and I have also forwarded a circular to the sextons, and written to the undertakers regarding the making out of their death certificates. I have annexed to this report copies of these circulars. Notwithstanding my efforts there are still some infractions of the law in the cities, towns and boroughs of the county, but all such violations are promptly prosecuted when discovered. In most cases, registrars are very particular about their endorsements as to time when certificates are received, but the fact that the registrar is changed, so often,—in some towns nearly every year, a new man

being elected,—causes more or less trouble, as a man just begins to become acquainted with his duties when his term of office expires. My annual examination of the records of each city, town and borough has been completed, and I find the condition of the records quite satisfactory, although there is still room for improvement.

The process of bringing the different persons, upon whom some duty is imposed by our registration laws, to a realization of the fact that the laws, as they now stand, must be fully complied with, seems to be a very slow and annoyingly difficult task ; yet if we trace the historical development of the entire system of vital statistic registration in this State, from the date of the enactment of the first law relating to the subject, June 24th, 1848,—we shall be constrained to admit that the rules of this system have never been rigidly enforced, and that they have been largely disregarded, except in so far as the secretary of the Board of Health has been able, by continued personal effort, to secure compliance with them. So it appears that the present difficulties we have to encounter in securing the effective recognition of these laws are only the result of a long protracted neglect, and the extent of these difficulties is, therefore, hardly surprising. For many years, physicians have been in the habit of consulting only their own convenience in regard to the time when they should submit their “Returns of Birth,” though their report has always been made at least once a year, and, generally, when the local registrar sent for the “Return” to enable him to complete his annual abstract. The sextons of cemeteries, in many of the towns, did not make returns of the burials. The undertakers did not always secure a “burial permit” from the registrar, before interring a body, and in many other respects the law was frequently infringed. All this I have made strenuous efforts to change, and I am able to report that I know there is a general compliance with the legal requirements.

My visits to the registrars of each town, though some of these visits are made but once a year, have enabled me to secure the coöperation of those officers in the enforcement of the laws. It is now their ambition to have perfect records, and if a physician does not make perfect returns, they call his attention to the imperfections, and finally secure his coöperation.

By thus working in connection with the registrars, I have been able to secure accurate and immediate reports, from them, of

violation of the law, and have thus been enabled to bring the matter to the attention of the delinquent, at the time, which is much better than finding it out at the end of the year.

I have in reality two separate and distinct assistants, if I may so call them, in each town in the county, to wit, the town health officer, by whom I am made acquainted with all the violations of the health laws, and the Registrar of Vital Statistics, by whom I am informed of the violations of the laws which he has to administer; and the two departments require entirely different attention and work.

In closing I desire to extend my thanks for the assistance rendered by the Secretary of your Board, on every occasion when I have requested his aid.

Respectfully submitted,

C. E. HOADLEY,

*County Health Officer, New Haven County.*

The following circular was issued by Mr. Hoadley:

*Office of C. E. Hoadley, County Health Officer, New Haven, Conn.*

DEAR SIR:—Permit me to call your attention to the fact that the Death Certificates returned to the Registrars in New Haven County are not, as a rule, properly filled out. I believe that, in many cases, the Certificates have not been made out by the Physician, *as the new law requires*, but by the undertakers, and I would respectfully ask your coöperation in this matter, that the law may be complied with.

A word regarding your birth certificates, which the law requires shall be returned during the first week of each month.

Please make them complete, if possible, giving all the information required, and do not forget to insert date upon which you make them out, also signing same, as a *physician*.

You can do a great deal toward assisting me in securing a strict compliance with the Registration Laws, and I trust you are willing to do so.

Respectfully yours,

C. E. HOADLEY.

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#### REPORT OF NEW LONDON COUNTY HEALTH OFFICER.

*To the State Board of Health:*

The statute imposing the duty of making this, my third annual report, requires each county health officer to make a full record and report of his doings. There are, however, many demands made upon his time in the performance of official duty that would serve no valuable purpose and prove of no public interest if

embodied in a report. Such matters therefore, although among my doings for the year just closed, and doings that have occupied much time in the consideration of questions submitted to me by the health officers and other, in consultations, and in correspondence, will not be made the subject of a detailed report.

During the last official year much time has been devoted to that branch of duty which requires the execution of the laws relating to the registration of vital statistics, with a view of so perfecting the same that they may in the future serve the purposes for which they were intended. When this work was decided upon by the health officers of the several counties I doubted its expediency. A careful examination of the records and the returns upon which they are based has, however, convinced me of the value of this undertaking. Notwithstanding the fact that the State has provided compensation to the physicians for making their returns of births and deaths, such returns the county over show a uniform lack of care in furnishing the facts required by the statute, and in many instances they are so imperfect that they would serve no purpose in establishing the identity of the person. Measures are being taken by me in conjunction with the health officers in the other counties to correct this fault throughout the State, and prosecutions will follow any wilful violation of the law.

One violation of the Medical Practice Act came under my notice during the year, was carefully investigated and a prosecution instituted before the City Court of Norwich. The accused was a preacher of the gospel, who, without a license, attempted to treat the physical ills of his flock when not administering to their spiritual wants. And it is a fact that seems worthy of mention here, that every person who has thus far been complained of to me for violating the Medical Practice Act belonged to this same class of preacher-physicians. Two of the three cases reported to me have been thoroughly investigated, and in each case there has seemed to be sufficient cause. The case above noted resulted in a conviction before the City Court, an appeal to the Court of Common Pleas, and payment there by the accused of the fine imposed in the City Court. In the other case I am satisfied from my investigation that the party complained of procured his license to practice by fraud, but the evidence has not been procurable to the present time to warrant a prosecution. The titles "Rev." and "M.D." at the two ends of one's name on a prescrip-



tion look strangely out of place, and in every case that has come under my observation, there has been an odor of quackery and fraud that leads me to question the wisdom of issuing a license to practice medicine to any person who practices the other profession.

Only one appeal from the orders of the city and town health officers has been brought formally before me for a hearing during the year. In this case the order of the city health officer was slightly modified and affirmed.

I am glad to be able to report a general improvement in the performance of their duties by the several town health officers in the county, and a growing desire on the part of physicians to comply with the laws relating to the public health. Past failures for the most part have been the result of want of care, and I fully believe that the improvement will be more marked during the present year than it has during the past.

Respectfully,

CHAS. F. THAYER,

*County Health Officer, New London County.*

June 29, 1896.

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#### REPORT OF COUNTY HEALTH OFFICER FOR FAIRFIELD COUNTY.

##### *To the Honorable State Board of Health :*

In accordance with Chapter ccxlviii, Section 4, of the Public Acts of 1895, I hereby make report of my doings for the year ending June 1st, 1896.

The year so ending is the second of my incumbency of the office of county health officer for Fairfield County. The first year was largely devoted to bringing about uniformity of regulations and of action among the several health officers of the county and a more complete understanding on their part of their powers and duties under the present law, which had been in operation but a few months when I took office. This work has demanded less attention in the year just closed.

There has been but one change in the *personnel* of the town health officers of this county during the year.

Every health officer, whether of town, city, or borough, in Fairfield County, is a graduate physician, with one exception, that of the health officer of one of our larger cities, who is a layman of some sanitary experience.



This corps of health officials have come more completely to understand their powers, duties and limitations under the law, and many of them have devoted much time to the careful study of sanitary questions, with a special view to their work. They have shown a growing interest in the work in hand, and have pursued it in many instances in the face of considerable difficulty. It is safe to say that the health officers of the county are a more efficient body of men than they were a year ago. Their efficiency is also augmented by a more complete appreciation of the work on the part of the public in general, and especially of the medical profession. At the time I took office there was some friction between the health officers and physicians in their respective communities. There was a reluctance on the part of some physicians to report cases of contagious disease, owing to the fact that the health officer was a physician, lest the latter should criticise the diagnosis or treatment of attending physicians. This matter was fully discussed at a meeting of the health officers, and it was agreed that occasion rarely, if ever, exists for the health officer to see the patient where another physician is in attendance, and that it was never his duty to criticise directly or indirectly the diagnosis or the treatment. This policy has, I believe, been uniformly adhered to and has resulted in more cordial relations between the officers and the local physicians. In most towns there has been an entire disappearance of any friction, and the health officer has the cordial coöperation of the physicians.

Many puzzling questions have been referred to me by the town health officers, and at some time during the year I have been called to nearly every town in the county at least once, to assist in solving problems upon which the local health officer was unwilling to act without advice. These questions have been very largely those relating to the abatement of nuisances, and have in almost every instance been easily divisible into two parts; one sanitary and one legal. By divorcing the sanitary question from the legal and practical, the local health officer has been able to determine the part particularly within his province, namely:—Whether the condition complained of was or was not a menace to the public health. This question being determined in the affirmative, I have advised the town health officer as to his power in the premises and the course to be pursued in case of a failure to abate the nuisance.

There has been little difficulty in the enforcement of the orders

of the town health officers. It has occasionally happened that town health officers have reported to me failure on the part of some one to carry out proper orders, but it has almost invariably been the rule that proper representations as to the law, and the penalty for its violation, have brought about compliance. In a few instances prosecutions have been begun which have always brought about speedy compliance with the order of the town health officer.

In some cases I have been called in to advise the town health officer where the sanitary question involved was one which he did not feel willing to determine upon his own responsibility alone. A case of this kind was that arising from a complaint made by a number of citizens of Westport, to the effect that the refuse discharged from the Atlantic Starch Works into the Saugatuck river created an offensive and dangerous nuisance along its banks. The complaint was referred to me by the local health officer, and inasmuch as it involved sanitary questions which the local health officer did not care to determine upon his own responsibility, I asked Dr. Lindsley of the State Board of Health to accompany me to Westport for the purpose of investigation. A public hearing was given at which a large number of citizens were heard upon both sides of the question. After hearing all parties, examining the location and learning the result of an analysis of the starch refuse, it was determined by Dr. Lindsley and myself to advise the town health officer that the condition complained of did not appear to be one prejudicial to public health. No action was therefore taken, and no further complaint has been made.

Prior to my taking office frequent complaints had reached the health officers of the adjoining towns of Stratford in Fairfield County, and Milford in New Haven County, of a nuisance of long standing near the mouth of the Housatonic river which separates the two towns. It had been the custom for some years to gather mussels in large quantities from near the mouth of the Housatonic river and to pile them upon the shore upon both sides of the river. Thousands of bushels of these shell-fish were annually piled in that locality and permitted to open and putrify in the sun, creating an indescribable odor, which, when the wind was from the right direction, was borne across to the village of Stratford, a mile and a half or two miles distant. During the summer of 1895, these complaints being renewed, were referred by the town health officers of Milford and Stratford to Mr.

Carleton E. Hoadley, the county health officer of New Haven County, and myself respectively. A method of daily disinfection was advised which the fishermen carried out at their own expense, which resulted in so far quelling the odor that it was no longer borne into the adjacent villages, and no further complaint has been heard.

I have selected the above instances in which I have been called upon to advise the local health officers merely as illustrations, and because they required in their solution some care to avoid interference with established occupations.

A large number of smaller but no less important matters of nuisance have received attention upon request of the local health officers.

In September, 1895, a small epidemic of typhoid fever broke out in Danbury. The investigations of the local authorities into the cause, created a suspicion of some source of infection in one of the hat shops. The proprietor requested me to come to Danbury and advise him as to what further means could be employed to thoroughly investigate and determine the source of the infection. After spending a day there and satisfying myself that it was a matter for the State Board of Health, rather than for the county or town health officer, I visited the Secretary of the State Board of Health, who at my request sent Dr. H. E. Smith of the Yale Medical School, to make an expert investigation. I furnished Dr. Smith with such materials and data as I had obtained, and he made a thorough examination of the probable sources of infection, which satisfied him as to the cause of the epidemic. His report, made to the State Board of Health, is printed in the annual report of your Honorable Body for the year 1895.

In several matters where I have been called upon by the local health officer, there seemed to be some question in the minds of a number of people as to the powers of the health officer to interfere at all. It is of course difficult to determine when an unsanitary condition affects or may affect the public health, and when it is so restricted in its probable effect that only the individual responsible for it is likely to suffer. Only in the former case have I advised action by the health officer.

I have always advised the health officer to carefully avoid being made use of for the satisfaction of personal spite or in the furtherance of neighborhood quarrels.

Complaint was made to Dr. W. J. Tracey, the town health

officer for the town of Norwalk, of the over-crowding of one of the schools in that town. He was in some doubt as to whether this was a matter within his jurisdiction, and asked me to advise him. An examination of the school was made and certain rooms were found badly over-crowded. After giving the matter careful consideration, I advised Dr. Tracy that he had power to issue and enforce an order addressed to the school board, forbidding the use of rooms complained of for more than a given number of scholars.

Such an order was issued, sufficient time being given the school board to carry it out, which they did by hiring rooms elsewhere and removing a number of the pupils from the over-crowded school rooms.

The language of the statute has left me in some doubt as to the exact relation which the county health officer bears to city boards of health and health officers. The statute makes it the county health officer's duty "to coöperate with and supervise the workings of" these boards and officers. By authority of this statute I have done what I could in advising and assisting city and borough health boards and officers wherever called upon to do so, but have not attempted to force myself upon their deliberations or to interfere with their action. During the year I have attended nearly all the regular meetings of the Bridgeport City Board of Health, and have frequently conferred with and advised the health officers of almost all the cities and boroughs in the county.

At the request of the Common Council of the City of South Norwalk, I appeared before that body and spent an evening in discussing the certain proposed ordinances relative to public health. The Council have adopted a set of ordinances based upon the regulations of town health officers throughout the State, modified in some particulars to meet conditions peculiar to South Norwalk.

The law of 1895, making it the duty of the county health officer to appoint a health officer for such boroughs and cities as failed to appoint a health officer of their own motion, affected but two boroughs in Fairfield County, New Canaan and Bethel. In both of these boroughs, after the expiration of the limit set by the statute, I appointed as borough health officer the same man who had previously held the position for the entire town, including the borough.

Two meetings of the town health officers of the county have



been held. One of these was a joint meeting of the town, city, borough and county health officers of the counties of New Haven and Fairfield. It was held in Bridgeport, and was very fully attended from both counties. Discussions of several practical sanitary questions were had and a full comparison of methods in the two counties. I believe that much good resulted from these meetings, which have not been called more frequently solely upon the ground of expense to the towns in sending their health officers to a central point.

The work of the town health officers in the matter of the abatement of nuisances has been a large one. I am unable to give an accurate estimate of the number of nuisances actually abated by them, during the year, but I deem it entirely safe to say that between three hundred and four hundred nuisances have been examined and abated by them. This estimate does not include their annual examination of school buildings, and the issuance of orders for the improvement of the sanitary condition of out-houses, etc.

I have endeavored in every way to coöperate with the State Board of Health and to be governed in sanitary matters by their suggestions. It seemed altogether desirable that the State Board of Health should have monthly reports from the local health officers of the number of cases of contagious disease reported to them. It was therefore arranged that they should make such reports. I have taken considerable pains to see that this was done, with the result that nearly every town in the county has been reported in the Bulletin of the State Board of Health.

The Medical Practice Act, so-called, has demanded some attention. Complaints of violations of its provisions have reached me from the towns of Danbury, Greenwich, Bridgeport, Westport and Stamford during the past year. In Bridgeport a considerable number of unregistered midwives have been discovered and compelled to desist from practicing. One, found illegally practicing, took the examination in midwifery and was admitted to registration.

In Danbury, more than a year ago, an unregistered practitioner was discovered doing considerable in the way of treatment of disease. I called upon him and conferred with his attorney. Upon his promise to leave the State, no action was taken. He left the State, but during the past winter it was learned that he had returned to Danbury. After some difficulty, evidence



was obtained of his illegal practice and he was arrested, tried in the City Court of Danbury, found guilty, and fined \$100 and costs. He appealed to the Court of Common Pleas, but before his case was reached, withdrew his appeal, paid his fine, and abandoned illegal practice.

A large number of inquiries reach me as to the provisions of the Medical Practice Act; all of which I have answered or referred to the State Board of Health, when that seemed the proper course.

More attention has been given during the year past, and especially since January 1st of the present year, to the enforcement of laws relating to the registration of vital statistics. More complete examination of the records of the various towns have been made. It became evident from the previous examinations that very great laxity had existed in the matter of reports to the registrar of births and deaths and, in some towns, marriages.

Prior to the present year, my attention had been devoted very largely to bringing about greater promptness in the certification of births. In this respect there has been in most towns very satisfactory improvement.

As to births: Prior to the creation of the office of county health officer, there being no one upon whom the duty of enforcing the registration laws devolved, the physicians had grown extremely negligent and frequently made their returns but once in each year, although required by law to do so each month. All physicians delinquent in this respect were communicated with, and their attention called to the statute and the penalty for failure to comply therewith. In aggravated cases certain physicians were notified that further wilful violations of law in this respect would be prosecuted.

After beginning my examination of the records for the year 1895, soon after the first of January, 1896, I selected a physician in Stamford, whose attention had been repeatedly called to the matter, but who had failed to return to the Registrar certificates of a considerable number of births attended by him in 1895, until well on in January 1896, and then made very incomplete returns, and only after repeated solicitation on the part of the Registrar. The evidence of his violations was collected and a prosecution brought against him, resulting in a plea of guilty and the imposition of a fine. The publicity given this case has resulted in much improvement throughout the county.

To remind physicians of the duty imposed upon them by statute I placed in the hands of each physician in the county a reminder card : printed in large type—red ink, to place conspicuously upon his desk ; that birth certificates must be delivered to the registrar before the end of the first week in each month.

Having placed it beyond the power of any physician in Fairfield County to truthfully plead ignorance of the statutory requirements as to promptness of the return, I sent a circular letter to all the physicians in the county, with the purpose of bringing about greater completeness in the returns themselves. The following is the letter :

DEAR SIR:—A uniform effort throughout the State is being made by the county health officers to perfect the registration of vital statistics. I have called the attention of most physicians in this county to the requirements of the law in respect to the promptness of return, in which particular I find there has been much improvement.

I now desire to call your attention particularly to the need of greater care and accuracy in the individual certificates, especially those of births.

The main purpose of the registration of births is to furnish to the public a reliable means of tracing relationship, upon which depend matters of inheritance, descent of property, pension rights, etc., as well as matters of more sentimental interest, such as genealogies, etc., and to furnish such records as will be reliable and full, years hence, when collateral sources of information have disappeared.

These returns should therefore be made with sufficient care, accuracy and completeness to render them useful as evidence in court.

All facts tending to prove the identity of parents should be carefully included, as this may be the vital point at issue in many important matters. The frequent repetition of the same name renders it particularly desirable that the birthplace, age, etc., of the parents and the maiden name of the mother should be carefully given in the certificate.

A certificate which gives the birthplace of parents as "U. S.," "Ireland," or "Hungary," is of but little value for the purpose of identification compared with one which contains the exact age of the parents, the town in which each was born, etc., etc.

The maiden name of the mother is a very useful fact in identification. It is often omitted but should always be supplied in birth certificates.

It may seem sufficient to certify that a child was born in the town of "B." instead of Bridgeport, but such a certificate would hardly be satisfactory evidence that the child was born in Bridgeport. While for practical purposes we should assume that such was the case, such certificate would fall short of satisfactory proof of the fact, in a judicial inquiry.

For mere statistical purposes, these inaccuracies may seem of but little importance, but when the records are viewed as means of proof of facts, years afterward, when weighty matters may depend upon them, they become of the utmost moment.

Many other inaccuracies and abbreviations appear in birth and death certificates, which at first seem to be of little importance, yet when the purpose of the record is considered, it is seen that the certificate is vitiated for the purpose for which it is designed.

This letter is sent to all physicians in Fairfield County, in the hope that those who have made their returns hitherto, with the accuracy which the law contemplates, will continue to do so, and those who have fallen into the errors pointed out, will take pains to make their returns with such care that they will accomplish the purpose for which they are designed.

Yours very respectfully,

GEORGE E. HILL,

*County Health Officer for Fairfield County.*

41 Sanford Building, Bridgeport, Conn., March 16th, 1896.

My examination of the records, and inquiry from collateral sources of information, led me to the conclusion that notwithstanding the legal requirements and the efforts which I have made to bring about compliance therewith, a large number of children are born no record of whose birth ever appears upon the Registrar's books. To satisfy myself as to the extent of this failure of registration, and to ascertain, if possible, whether there were physicians in practice who neglected altogether to make returns, I employed a man who could speak the Hungarian language as well as English, and sent him through certain designated streets in Bridgeport, inhabited mostly by Hungarian, Italian and other non-English speaking people, to make a house to house canvass. He was thus engaged one day, and obtained complete birth certificates of fifty children born during the years 1894 and 1895. These were compared with the official records and it was found that less than fifty per cent. of the births so ascertained appeared on record. In most instances no physician had been in attendance.

As to deaths :—In the record of deaths, the matter of promptness does not demand attention, inasmuch as the requirement that the certificate of death shall be in the hands of the Registrar before issuance of a burial permit, brings all certificates into the Registrar's office within the statutory period. Registrars have very carefully observed the law in this particular. The law evidently designs to make it possible to ascertain from the record

the place of burial of every person dying within the town and the place of death of every person buried within the town. This, the statutes, strictly construed, do not fully accomplish, although in many towns the Registrars add to their records certain facts not required by law. There seems to be no statute requiring a Registrar to retain memoranda relative to permits issued by him.

In the case of a person buried in the town where he died, it should be possible to ascertain from the records the following facts: (1) when, where and from what cause he died, together with all the facts required to be given in a certificate of death; (2) when the certificate of death was received for record; (3) when and to whom, and for burial in what cemetery, permit was issued; (4) where and when the interment took place. All these facts are now found upon a perfect record save (3).

When a person dying in the town of A, is buried in B, it should be possible to learn from the records of A whether the body was removed, and in B, whence it came. This does not appear of record. A record kept by the Registrars of all permits, whether for burial or removal, and a return by cemeteries of the place of death of all persons buried on out-of-town or "removal" permits, would remedy these defects. For illustration, in one town I visited recently there were upon the death record the names of over twenty persons whose names did not appear upon the burial book. There were no means of ascertaining whether these bodies had been removed from town or, having been buried in town, the sextons had failed to make returns of such interments. Subsequently I found the names of several of these on the burial book of the adjoining town, but of course nothing to show where they had died. Registrars in many towns have, some of their own motion, and some at my suggestion, adopted the practice of noting, on the margin of the death certificates, the names of the person to whom permit was issued, and the cemetery named therein.

The new blanks recently issued by the State Board of Health have a space provided for memoranda of the cemetery in which interment is made.

Careful examinations have been made of all death certificates and the date of their return has been compared with the date of burial as returned by the cemeteries. This examination has disclosed the following:

1. That very few interments have taken place without a permit.



It seems, however, that in the case of still-births, interments often take place without a permit. This is not done by undertakers nor in regular cemeteries, and seems in almost every case to be done by the parents and through ignorance.

2. That in a very few cases interment has taken place prior to the issuance of the permit. All such cases have been investigated and the undertaker called to account. It has generally been the case that such a violation of law has been caused by the failure of the physician to provide the death certificate—the necessary prerequisite to the permit. In no case have I found such violation as seemed to me to justify prosecution. It is not generally understood by undertakers that any reputable physician or health officer may issue such a death certificate as will justify the issuance of the permit by the Registrar. It is my purpose to prosecute any repetition of such offense, and I have so notified all undertakers who have been found guilty of such offense in the past

3. That the burial books have been neglected in many towns, and the returns by the cemeteries have been very incomplete and inaccurate. The distinction between a “burial,” a “removal” and a “disinterment” has been much misunderstood, and much confusion of the burial records has resulted. In each town, I have carefully explained to the Registrar all errors on his part and have communicated with or seen personally all cemetery association superintendents who have been at fault, and explained the requirement of the law. The result has been that the burial books are kept more nearly in accordance with the law than they ever have been. There is much room for improvement yet, inasmuch as there are a large number of small cemeteries throughout the county which have no responsible heads and of interments in which no return is made.

4. That in some towns, the Registrar has failed to require an affidavit of the proper disinfection of the body of a person dying of contagious disease. This has in all cases been corrected.

5. A year ago the date of the reception of the certificate by the Registrar was not, in the smaller towns, indorsed thereon. This is universally done, now.

As to marriages:—Clergymen were, two years ago, often negligent in their returns of marriages solemnized by them. All such were communicated with, and almost universal promptness has resulted. I rarely found during the past year any instances of delinquency in this particular.



To summarize, the most conspicuous faults which I have found in my examination of the records throughout the county :

1. Failure of physicians to certify births as promptly as the law requires, in which respect there is marked improvement.

2. Omissions from certificates of birth and death—of (*a*) birth-place of parents ; (*b*) sex ; (*c*) name and age of parents ; (*d*) duration of disease (from death certificates.)

3. Abbreviations of names of towns, etc., and insertion of name of state or county only, as birthplace of deceased, or of parents, instead of name of town.

4. Illegibility, either because of bad chirography or use of soft lead pencil.

5. Ill-kept burial books in a few towns.

6. Failure of Registrar in a few towns to note date of reception of the certificate.

Under the law of 1895, requiring the completion of the records of births, deaths and marriages back to 1850, from church records, and records of magistrates, the Registrars of nearly every town have begun the work. In about one-half the towns in the county, this work is completed, and in the balance it is in progress. In the towns where there have existed, during the past 50 years, churches of the Roman Catholic and Protestant Episcopal denominations, much valuable material has been obtained from their records by the Registrars. Many questions have been presented to me in relation to the work of thus completing the records. I have advised Registrars to use every available and reasonable means of verification of the records thus obtained, and for this purpose, they have been aided materially by old directories, tax lists, voting lists, and similar sources of contemporary information. As a rule this work has been carefully and conscientiously done, and very reliable results obtained. In some towns this method is being continued annually. At the end of each year, the Registrar examines church records, and adds to his own records of births the names of a considerable number of unregistered children.

In all towns, with one or two exceptions, every reasonable effort is made by the Registrars to obtain and add to the records the Christian names of children whose births are recorded, but whose "given" names do not appear.

In my examination of records of vital statistics I found that in one town the records were not kept in a fireproof vault or safe,

but were exposed to fire in the Registrar's dwelling-house. I brought this fact and the law to the attention of the Registrar and the Selectmen, and it was ultimately remedied by the purchase of a safe.

The amount of office work, especially correspondence, has increased during the past year, though the increased familiarity of the town health officers with their duties, and the statutes under which they are called upon to act, has diminished the number of appeals to me by those officers for advise upon unimportant matters.

There are at present a number of important matters pending, among them an appeal from an order of a town health officer for the abatement of a nuisance arising from natural causes, under the statute of 1895, relating to that subject.

Respectfully submitted,

GEORGE E. HILL,

*County Health Officer for Fairfield County.*

Bridgeport, Conn., June 1st, 1896.

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#### REPORT OF THE COUNTY HEALTH OFFICER OF WINDHAM COUNTY.

##### *To the Connecticut State Board of Health :*

GENTLEMEN :—As County Health Officer of Windham County I submit the following report, for the year ending June 1st, 1896.

The *status* of the present system is becoming so well-defined that the report of one year is practically a continuation of that of the previous year. In other words, the duties of the County Health Officer are gradually settling themselves into a mass of routine work, consisting of a great deal of correspondence, consultation, advice, and supervision of the work of the Town Health Officers in its manifold phases.

The above statement, in general, essentially describes the work of the past year. No appeals have been taken to me ; neither have I instituted any prosecutions. The framers of the legislation which is embodied in our present health laws undoubtedly thought that appeals from orders of town health officers, and prosecutions for violations of the law, would be of much more

frequent occurrence than the facts prove. Now, I attribute the infrequency of appeals and prosecutions largely to the existence of the close relations between the Town Health Officers, the State Board of Health, and the County Health Officers. The former seldom, or never, make an order that is not palpably correct on its face without first consulting with the County Health Officer relative to all its legal bearings. When in doubt on questions purely sanitary in their nature, the State Board of Health gives immediate advice. Thus the majority of orders made are pretty thoroughly considered, and the result is what I have already outlined. Perhaps an exception should be made in the matter of quarantining in cases of epidemic. There, of course, the necessities of the situation demand immediate action,—to be followed rather than preceded by an examination of the legal aspects of the case. But the public sentiment is so strongly in favor of extreme preventive measures during the prevalence of contagious disease in a community, that it pays little attention to the question whether the quarantine is not more rigid than the occasion demands. Altogether, I am satisfied that the system has reached a high degree of efficiency ; that the comparative immunity from contagious disease which the county has enjoyed is largely due to the efficiency of the system ; and that this efficiency is to a greater or less degree dependent on the intelligent and close coöperation of effort between the State Board and the Town and County Health Officers in the manner I have endeavored to briefly describe.

A few alleged violations of the Medical Practice Act have come to my attention. Two of them were by physicians of a neighboring state who complied with the law as soon as they knew what it was. The third case was peculiar in its nature. A family, comprising among its members several children, living in a sparsely settled district, remote from physicians, was attacked with diphtheria. One of the children had died, and the others were in imminent danger of death, when a physician from another state, who chanced to be visiting for some weeks in the neighborhood, took the cases in charge and subjected the children to the anti-toxine treatment. The situation seemed to me to be too serious to warrant interference on my part for the technical violation of the law ; and on submitting the facts to your secretary he confirmed my position. The result, also, would seem to justify that attitude, for the children recovered, and the quaran-

time had been so effectively maintained that no other cases developed. The infraction of the law was, at best, purely technical, and hardly seemed to me to come within the intent of the statute.

I have had no trouble with questions arising from the uncertain aspect of the law relating to the health officers of cities and boroughs appointed in accordance with the provisions of their charters. There are two cities and one borough in this county. At the request of the officers of the latter municipality I appointed the health officer designated by them in order that he might come under the provisions of our general law. Each of the cities has appointed as its health officer the person appointed by me as health officer of the town in which the city is located.

Questions have arisen as to the power of town health officers to close a school in the event of the prevalence of a contagious disease. I have advised that the town health officer should lay the situation before the school committee and, if the conditions justified it, insist that the committee order the school closed. Thus far that course has been followed, and schools have been closed in that way. If the committee should refuse to take action, I have advised the town health officer that, if the circumstances warranted it, they had the power to quarantine the school-house as well as such of the pupils and teachers as the welfare of the public health might demand. Thus far, however, no objection has been raised against taking the advice of the town health officers in the premises.

I have devoted such time as seemed to me necessary in endeavoring to help forward the work of getting our vital statistics in good shape. The registrars of the county have certainly done much in the past two years in this direction. By reason of their continued efforts, united with repeated letters and circulars from other sources, a great deal of improvement is apparent in the returns made. Compared with the very imperfect and shiftless condition of the returns of vital statistics that was apparent a few years ago in many towns, the present condition betokens vast improvement. At the same time a good deal remains to be done before the proper degree of correctness is attained. It appears to be another case where eternal vigilance is the price of the desired result.

In conclusion I would like to suggest that it would be of advantage to the town health officers if the circulars which have from time to time been issued by the State Board could be printed



together in pamphlet form for distribution among them. Several have called my attention to this and I fully indorse their views.

This report is made under date of June 15th, 1896.

I am very respectfully yours,

WILLIAM A. KING,

*County Health Officer of Windham County.*

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REPORT OF THE COUNTY HEALTH OFFICER OF LITCHFIELD  
COUNTY FOR THE YEAR ENDING JUNE 1, 1896.

*To the Hon. State Board of Health:*

GENTLEMEN :—In accordance with the statute I report as follows :

I have carefully examined the certificates and records of vital statistics in the registrar's offices of the several towns in the county, finding them much more full and accurate than those of the year previous. One physician was found who seemed incapable of understanding the necessity of filling in the blanks in certificates of births. He had returned the birth of a still-born child in the town of "Feb'y 22d, 1895." No name of father or mother nor place of residence of either given. The certificate was signed "J. Swett."

When I called this gentleman's attention to these defects he was highly indignant and wrote to the secretary of the State Board of Health, asking if these particulars were necessary, as appears by his letter published on page 29 of the Secretary's report for 1895. Several sextons were reported by the registrars as not making reports of burials in the cemeteries over which they had charge, but upon their attention being called to this neglect they readily complied with the statute.

Judging from present indications, the records of vital statistics will in the future require but little time and attention from the county health officer.

In the fall of 1895 I requested the town health officers to examine all the school-houses and out-buildings connected therewith in their respective towns, and make such orders as might in their judgment be needed to preserve the health of teachers and pupils. I also requested the town health officers to inspect the waters from



which ice was to be taken for domestic use or sale. Also to inspect the railroad stations as to whether they were supplied with water closets kept in a proper sanitary condition.

Whenever the town health officers have asked my coöperation and advice as to their legal powers and duties, I have freely given both, always endeavoring to so advise them that the end desired to be attained could be accomplished without resorting to legal proceedings, which I am happy to say have not been required, neither have any instances occurred when it seemed that a benefit or public good would be secured by instituting a criminal prosecution; therefore none have been brought.

But one appeal from the order of a town health officer has been taken during the year, and this was withdrawn just after the trial commenced, the appellant agreeing to comply with the order.

Two meetings of the town health officers have been held during the year—one at Litchfield in June, 1895, at which Dr. Wordin of the State Board of Health delivered an address on the aggressive duties of the town health officer; the other at Winsted in December, at which papers of interest were read by the members.

Respectfully submitted,

WM. F. HURLBUT,

*County Health Officer, Litchfield County.*

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#### REPORT OF THE TOLLAND COUNTY HEALTH OFFICER.

*To the Hon. State Board of Health:*

GENTLEMEN:—I have the honor to submit the following report of my doings as County Health Officer for Tolland County for the year ending May 31st, 1896. In my last report I took occasion to say, "much has been done to improve the sanitary condition of public and private buildings and their immediate surroundings, the good results from which, it is hoped, will become apparent during the coming year." There are good reasons now for thinking that some of the anticipated good results have come to pass.

During the past year no epidemic of any contagious or infectious disease has prevailed. Monthly reports from the town health officers have generally shown about half the towns to have been free from all contagious diseases.

In February, 1896, ten towns reported no cases. Occasional cases have occurred, however, a few of which were contracted

outside the county. As a rule these cases were promptly isolated by the town health officers, and very few secondary cases were developed.

There were ten cases of typhoid fever reported during the year. Three of them were at Eagleville and three at Hop River. The health officers were inclined to think that these cases were due to local causes, and ordered a considerable cleaning up of filth at both places.

In April, 1896, there were three cases of scarlet fever reported at Storrs College. All were children, one of them being in the old college building, the other two in the family of one of the professors of the college in a tenement just across the street. Complaint came to me soon afterwards that the orders of the town health officer in regard to isolation of the cases were being violated. I found upon investigation, however, that the complaint was not well founded. The patients all recovered, and no secondary cases resulted. There were no cases of contagious diseases among the students of the college during the year. The Temporary Home for Neglected Children at Vernon has contained on an average during the year about forty children, but there have been no cases of contagious disease there. A considerable addition was made to the Home in the fall of 1895. An additional supply of running spring water was brought into it, and the general sanitary condition of the buildings and grounds was much improved. It is due to the town health officers to say, that the important results attained by last year's work have been due in large measure to the promptness and intelligence with which they have performed their duties, and that they acted with such discretion and good judgment that very little fault was found in regard to any of their orders. No appeals were taken during the year. There has been no failure on the part of any town health officer to make his monthly report to the State Board of Health since January last. Two meetings of the town health officers were held at Rockville during the year, the first on July 2d, 1895. It was called for a general interchange of views in regard to the duties of health officers under existing laws.

Nathaniel E. Wordin, M.D., of Bridgeport, a member of the State Board of Health, was present, and delivered a very able and instructive address. After giving a history of former legislation relating to public health and touching briefly upon the general subject of hygiene, he proceeded to give his views upon the pres-

ent duties of town health officers. He said that whenever they had good reasons for thinking that the public health was in danger they should act promptly, and not wait for complaints to be made. A general discussion followed Dr. Wordin's address. The next meeting was held October 30th, 1895, and was addressed by Dr. C. A. Lindsley, secretary of the State Board of Health. He touched upon quite a wide range of topics, but gave special attention to the duties of town health officers in regard to isolation and disinfection in cases of contagious disease. As is well known Dr. Lindsley is a high authority upon all sanitary matters, and his address was listened to with marked attention by all present.

I think the meetings were profitable, and that they have resulted in a better and more uniform administration of the health laws in the various towns. A few cases of neglect on the part of physicians to report cases of contagious diseases to the town health officers were called to my attention, but as they were all first offenders and none of them seemed to have been actuated by any willful motives, I did not think it best to bring any prosecutions, especially as all those I saw promised to be particular about reporting future cases. In August, 1895, I was consulted by the town health officer of Coventry as to whether or not a small tract of swampy land in the upper part of South Coventry could be filled under the act of 1895, which provides for the filling or draining of swampy lands when dangerous to public health. It appeared from an investigation that some refuse matter was being run into said swampy land from a shoddy mill just above, and it did not appear clearly that whatever danger there might be to the public health proceeded from natural causes. I therefore advised that the land in question could not be filled under the act of 1895.

From reports received from town health officers as well as from observation, I have reason to think that the water and ice supply of the county is generally good, with the possible exception of the ice taken from the Willimantic river. The sewage from Stafford Springs, Hydeville and Staffordville all empties into it, and when the water is low it becomes very filthy for some miles below Stafford Springs. So far as I know no ice is cut within ten miles of Stafford Springs, and no case of contagious disease has ever been traced directly to the use of the ice, though there have been a number of cases at Eagleville the past two years, where some of the ice is used.

A great improvement has been made in the records of vital statistics during the past year, though considerable still remains to be accomplished in that direction. When I first visited the various towns in the county I found the records imperfect in many particulars. The names of children were lacking in about forty per cent. of the birth records.

For the year 1895, excluding still-births and those of children dying before being named, the name of no child was lacking in the towns of Andover, Bolton, Columbia, Hebron, Mansfield, Stafford and Union. I am satisfied that most of the registrars have done all in their power the past year to make their records as nearly perfect as possible. Formerly many clergymen and physicians were very negligent about returning their marriage and birth certificates. Now with rare exceptions they are returned as the law requires.

Respectfully yours,

MYRON P. YEOMANS,

*County Health Officer for Tolland County.*

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[No report from Middlesex County has been received in two years.]





# THE HEALTH OF TOWNS.



# HEALTH OF TOWNS.

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The following circular was sent to every town health officer in the State, suggesting a uniformity of method in the preparation of their annual reports.

To.....

*Health Officer of*.....

SIR:—Whereas you are required by law to make an annual report to the State Board of Health, to the county officers and also to your town, of your doings through the year, it is respectfully requested that in addition to a statement of your official work, you will give such information as you can on each of the subjects mentioned below, even if it be only negative. For instance, if there have been no cases of small-pox, that fact should be mentioned.

For the sake of uniformity and to assist in the utilization of these reports, will you kindly write on each topic in the order in which they are named.

It is also requested that the reports be written in narrative style, rather than in mere direct replies to questions, as heretofore.

Particulars are specially requested in respect to the origin of primary cases of contagious or infectious diseases and of their mode of transmission to secondary cases, when detected.

When epidemics have occurred, describe their extent and type, whether mild or virulent. Also give in some detail the methods adopted to restrict their spread.

The following subjects are respectfully suggested to be mentioned in every report. And in the same order.

## DISEASES :

Measles, Scarlet Fever, Diphtheria, Membraneous Croup, Whooping Cough, Typhoid Fever, Cerebro-Spinal Fever and Small-pox. Also, when they occur, Typhus Fever, Yellow Fever, Cholera, Hydrophobia, Leprosy, or any other rare or strange disorder.

If an excessive death rate has occurred please give the cause or causes, if known.

## OTHER TOPICS :

Methods of Garbage Disposal and results.

Methods of Sewage Disposal and results.

Public provisions, if any, for the care of Contagious Cases.

Sanitary condition of School Houses.

Sanitary condition of other Public Buildings.

The Water Supply.

Public works of sanitary influence, undertaken during the year ;  
such as Sewers, Drainage, Public Water Supply, Public Parks, etc.

What, if any precautions, in regard to Milk Supply.

Anything in addition to the above, of sanitary interest, will be acceptable and welcome.

In behalf of the State Board of Health,

Very respectfully,

C. A. LINDSLEY, *Secretary.*

## ABSTRACTS FROM THE REPORTS RECEIVED IN ANSWER TO THE PRECEDING CIRCULAR.

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FOR THE YEAR ENDING AUG. 31, 1896.

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These reports are arranged by towns in alphabetical order.

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ANDOVER—DR. P. H. EDWARDS, *Health Officer*.

Four cases of measles have been reported during the year, all of which were in one family. No other contagious diseases.

ASHFORD—DR. FRANK B. CONVERSE, *Health Officer*.

The town has been exceptionally free from contagious or infectious diseases, having but two cases of typhoid fever. The first occurred in December, 1895, and was of a very malignant type. The primary cause, in my opinion, was the drinking of contaminated water. The second case, in August, 1896, was of a mild character. Contracted disease while away from home. The death rate for the year ending August 31st, 1896, was slightly in excess of that of last year, owing principally to the prevalence of pulmonary affections, such as pneumonia, bronchitis, phthisis and la grippe.

*Garbage*—The garbage is either burned or carried a safe distance from the residential portion of the town and dumped in some vacant lot.

We have no system of public sewage; this being a farming community, the sewage is accumulated in private cesspools and privy vaults and used for fertilization.

The sanitary condition of the school-houses could be improved. Would suggest that the committee see that the privy vaults are kept in a sanitary condition and that the school-houses are properly ventilated. Condition of churches and other public buildings fairly good.

Water supply good, being obtained from springs and wells which furnish us with an abundant and superior quality of drinking water.

No work of a sanitary nature undertaken during the year.



BARKHAMSTED—DR. HOWARD D. MOORE, *Health Officer*.

There were no infectious diseases except two cases of typhoid fever reported during the year.

Inspected the sanitary condition of the school-houses in November, 1895, and found the same to be in good condition.

BERLIN—DR. R. E. ENSIGN, *Health Officer*.

This year is no exception to the dictum that Berlin is a healthy town, although several epidemic diseases have visited us. Measles we have had, but how many it is hard to determine, as physicians rarely report them, and a majority of cases receive domestic treatment only. I do not learn of any deaths attributed to them.

Of scarlet fever, six cases, ending in recovery—it was of a decided yet controllable type.

Of diphtheria, thirteen (13) cases reported and three deaths, mostly of a mild type; no treatment was given in one of the fatal cases. I do not learn that anti-toxine was used at all. I can only conjecture that the origin may have been in New Britain, where it seems to prevail almost perennially, and Berlin has close social and business relations with that city. By isolation, the outbreak did not rise to the dimensions of an epidemic. There were a few cases of whooping cough but no fatality reported. Three cases of typhoid fever with two deaths. I rise to explain that probably one of them was returned by the registrar as caused by suicide, which he committed in the delirium of the fever.

The town has no system of garbage disposal.

We have only a lack of system for the disposal of sewage, but the time is not far distant, in the growing district of East Berlin, when something must be done, and I recommend the employment of a sanitary engineer to say what is the best thing to be done.

The sanitary condition of school-houses is good. In view of so many contagious diseases the State Board recommended the disinfection of them by sulphur fumigation, which I think very commendable, and accordingly I notified the district committee of their action, supplementing it with my approval.

There has been great improvement in the railroad stations; the buildings are above criticism.

The water supply is from wells, cisterns and running brooks, and is good in all seasons.

No "public works of sanitary influence" were undertaken the past year.

Malarial troubles show an increase the past year, why I cannot say. I should think that more soil than usual was upturned in brick and road improvements.

It is hoped that la grippe has departed.

Public interest in sanitation is increasing. I have been called to abate more nuisances, have had more consultations about sanitary measures and living.

I try when a virulent contagious disease manifests to show that disinfection is well, but does not compare with isolation to prevent its spread, that cleanliness and sunlight are foes of the microbes of disease. Some people approbate cleanliness in the abstract but are "agin its enforcement," possibly from scruples, as they may have read and made a wrong interpretation of that "he which is filthy let him be filthy still," but modern teaching says, "let him be cleaned." Yes, and his premises if necessary ; in so doing the honest liberties of no man will be restricted and perhaps disease and death averted. Cleanliness of person and surroundings promote good morals ; it is uplifting. Those who allow all kinds of filth to accumulate in their houses are protected by the door from visitation of health officers. If it is sound law to quarantine after disease breaks out, it would seem even better to jugulate it before it got in its dreadful work of maiming and death, to say nothing of pecuniary loss. Formerly it was not uncommon for juries to render verdict, "Died by visitation of God," but as knowledge increased it has become obsolete and often a more proper one would, as lawyers say, be *felo de se* (a felon of himself).

"Public health is public wealth," and it follows as a corollary of public intelligence in sanitary matters. By no means do I wish to imply that this is the sole gospel of good health ; there are the accessories of good air, pure water, suitable clothing, rest and recreation. Never were sanitarians so active and well organized as now ; earth, air and sea are searched by enthusiastic investigators for means to promote health ; the invisible forces of nature are under tribute. The causes of disease are pursued by experimentation to their ultimate hiding place, and to know the cause is a long way toward the prevention—and the dominant idea in medicine is prevention ; the ancient idea was "resist the beginning ;" to lock the stable before the horse is stolen is wisdom ; to lock it afterwards is folly, unless it be to save the harness. There are those who lament the physical degeneration of the race in

this country; what are the facts? As I learn them it is not so; certainly statistics prove increasing longevity; the physique of women is better than fifty years ago, and there is where the improvement or degeneration begins. Who is entitled to the credit of that? Much of it is due to a better knowledge of health laws, disseminated by sanitarians, and some to more open-air exercise, like boating, tennis, gymnastics, and last, perhaps not least, the use of the "wheel;" many no doubt are benefited by it, but it like any other sport has its limitations. In conclusion I believe the public appreciate a live health officer and cordially second his efforts to carry out the spirit of the law.

To our pains-taking, efficient county health officer, D. A. Markham, Esq., is due much assistance in my work.

BETHANY—MR. SAMUEL G. DAVIDSON, *Health Officer*.

There have been a number of cases of measles. No deaths resulted.

There were two cases of diphtheria reported in February. All due precaution was observed to prevent the spread of the disease. When the patients recovered, the rooms were fumigated, thoroughly cleansed, clothing burned, &c.

The school-houses in the town have been fumigated during the vacation. The sanitary condition of the out-houses in the several districts was much improved from last year. The repairs on the out-houses have, in some cases, been neglected. It is a common thing to have this neglect in country districts. This lamentable fact is owing to the lack of funds. There is not enough set apart for incidental expenses to make these repairs and it is an up-hill business to assess the districts and lay a tax for these expenses.

No nuisances have been reported during the past year.

Bethany is a healthy locality and physicians find it to be a hard place in which to get a living.

The people of the town are ready to coöperate with the health officer regarding all sanitary measures necessary to be adopted for the welfare of its inhabitants.

TOWN AND BOROUGH OF BETHEL—DR. A. E. BARBER, *Health Officer*.

There have been of contagious diseases, to wit: of measles, eleven; scarlet fever, two; diphtheria, three; whooping cough, four; typhoid fever, eight cases.

And although (as seen above) there have been a number of cases of contagious diseases, really has been no epidemic, and the sanitary condition has been good, both in private houses and school buildings, the latter having been thoroughly cleaned, and will be fumigated before occupancy.

BETHLEHEM—DR. JOSIAH G. BECKWITH, *Health Officer*.

Measles were introduced into this town from Woodbury, where it was epidemic in March. The infection was communicated at an entertainment given in the height of the epidemic, which appears to have been popularly attended, and fourteen cases developed in this town in due time. Quarantine and isolation were enforced, and but one case was reported for April.

In May, two importations of this disease, from the towns of Woodbury and Litchfield respectively, resulted in fourteen cases of measles. All were carefully quarantined and isolated, and no cases were reported for June, and but one case for July, which developed from an exposure from outside the town limits. The total number of cases was 29.

Whooping cough was introduced into a public school by a pupil who attended a "Kickapoo" show in Morris, while whooping cough was rampant in that town. The school was pretty thoroughly infected before I had any notice of its existence, and seventeen cases developed in May. Quarantine was enforced, and but four cases were reported in June, and but one for July. Twenty-two cases in all.

Both epidemics were of a very mild type. One death resulted from whooping cough, which had followed measles in the case of a young child.

No other cases of infectious disease have occurred in this town, except one case of typhoid fever in November, 1895. Watertown had a number of cases at this time, and I was informed that the wash of two patients, publicly reported as sick with disease, had been brought into this town and washed at a fulling mill used by the public on certain days for washing clothes, and the family in which this case of typhoid developed had used the mill at the same time. Any further importation of "wash" from this source was prohibited.

Respecting the sanitary treatment of this case, I would say that the excreta were carefully disinfected and thoroughly buried in dry earth. This case occurred in a family of twelve persons



living amidst rather unfavorable sanitary surroundings, but no secondary cases developed.

The district school-houses are in a cleanly and sanitary condition. They are without exception, however, without proper means of ventilation. School-houses were fumigated in which cases of measles or whooping cough had occurred.

The ponds and streams of the town were inspected at the proper season, and but one notice to discontinue ice-cutting was found necessary.

Two nuisances were promptly removed on notice.

This town possesses excellent natural drainage, and I can see no reason why it should not be in a good sanitary condition.

BLOOMFIELD—DR. OLIVER K. ISHAM, *Health Officer*.

I will briefly mention some of the work done during the past year in town, and also about infectious diseases reported.

*Measles* was quite prevalent during the spring months. The exact number of cases is not known, as they were not all reported, for many were not sick enough to need medical aid. Fortunately there were few deaths from complications which so often attend this disease, as pneumonia, bronchitis, etc.

Hartford had more of these cases during the winter months, Bloomfield during the spring months and Tariffville about the same time as the latter, or later.

This interesting point well illustrates the time that it took this disease to reach distant points, as from one town to another. This disease probably developed among school children who attended school in Hartford, and among those who visited friends in the city, and they gave it to others.

*Scarlet Fever*.—In one school district this disease occurred in two families; each family has four or five children; they all had it and recovered. A careful quarantine was employed and a further spread of this disease was successfully checked.

*Diphtheria*.—The town has been nearly free from this disease during the past year; only one case was reported, and that recovered.

*Typhoid Fever*.—In Duncaster school district three cases of typhoid fever occurred, infection probably coming from a well at a house near by at which the school children obtained water for drinking. The well was condemned.



As regards garbage and sewage they are looked after to see that they do not contaminate wells.

The school-houses have all been inspected during the past year one or more times, also the drinking water when needed. The outbuildings of the school-houses, churches and the depot have also received attention.

Water supply is obtained mostly from wells or running brooks.

A few wells have been condemned as being too near barnyards or cesspools. The milk supply has to be looked after often to see that milk is not contaminated by washing cans with impure water.

BOLTON—DR. CHARLES F. SUMNER, *Health Officer*.

With the exception of a few cases of measles no contagious diseases have appeared in Bolton during the year. The cases of measles referred to were confined to two families, one at Bolton Center and the other at Quarryville (some ten cases in all), showing that proper care and precaution may be safely relied upon to prevent the spread of contagious diseases.

The health of the town has been usually good.

The attention of the school committees in the several school districts has been called to the necessity of cleansing the school houses by fumigation and other means, and of seeing that the water supply and privies are in suitable condition.

There has not been a case of small-pox in Bolton for more than 50 years.

BOZRAH—DR. NATHAN JOHNSON, *Health Officer*.

The general health of the town has been up to the average standard.

In December three cases of German measles were reported, all in one family. Strict isolation was maintained and the disease did not spread.

In September one case of scarlet fever—a boy, had just returned from another state, was discovered to have a very mild attack of the disease. As the case was in a thickly populated part of the town the premises were quarantined, no communication being allowed except through the health officer and physician, and after convalescence the house was thoroughly cleaned and fumigated with sulphur fumes. No secondary cases developed.

In December two cases of typhoid fever were reported of a

very mild type, away from any other house for a distance of one mile. The usual precautions were taken as to the disinfection and disposition of the excreta. No other cases. Cause not traceable.

No other infectious diseases reported. Concerning the depositing of garbage in the tenement house districts, barrels, or other receptacles are provided for its reception, and then it is removed to some suitable place. There has been notable improvement in the matter during the year.

The school-houses, of which there are seven, are inspected once each year during the summer vacation, and are in fairly good sanitary condition.

The water supply is mostly from wells and springs and good at all times.

No public works of sanitary influence undertaken during the year.

Ten complaints have been considered and all have been abated satisfactorily.

A general sanitary inspection of the most thickly populated parts of the town is made twice during the year, spring and fall, with a view of correcting any unsanitary condition that may exist.

BRANFORD—DR. WALTER H. ZINK, *Health Officer*.

There were reported to me during the year nine cases of diphtheria, occurring in Stony Creek and Branford Center, which were duly quarantined and the houses fumigated after recovery, and disinfected according to the methods employed by the State Board of Health, and many articles of bedding and clothing were destroyed by fire.

There were reported five cases of membranous croup.

One case of scarlet fever, in which the same precautions were taken.

Five cases of typhoid fever were reported to me, all of mild type. It was deemed inadvisable to quarantine the houses, but proper precautions were taken to prevent the spread of the disease.

There were twenty cases of measles reported, all of them of an extremely mild type. The usual sanitary precautions were used, but the houses were not quarantined, the health officer deeming it inadvisable to do so.

No other contagious or infectious diseases were reported during the year, and the sanitary condition and the general health of the town, with the exception of an outbreak of intermittent fever during the latter part of the summer and fall, has been extremely good.

During the year nine foul out-houses were abolished, and the same properly cleansed and disinfected ; also three foul cesspools were treated in the same way.

There was one case of imperfect drainage of the public streets complained of, which the selectmen of the town, upon being notified, attended to.

The number of the usual summer diseases in Branford has been extremely small. In the prevention of contagious diseases in Branford I have been much aided by the coöperation of the officers of the Malleable Iron Fittings Company and the Branford Lock Works ; also by the town officers. The manufacturing establishments of Branford, upon the information that any of their workmen resided in a house where such disease existed, would not permit him to come back to work until he had received a certificate from the health officer saying that it was safe for him to return to his work, which very much tended to prevent the spreading of these diseases.

The methods for the disposal of garbage employed in Branford is by burying and burning the same.

The methods of sewage disposal in Branford is by the open soil method and by cesspools. I have in every case advised as near as possible the open-soil method for the disposal of sewage, and have cautioned persons where cesspools existed to keep them well ventilated.

The sanitary condition of the school-houses is first-class. The other public buildings are now in good condition.

The water supply of Branford is by wells, and is generally good. Drainage has been resorted to by the town officers whenever it was practicable and desirable to do so.

The public green in Branford has been much improved during the past year by the Village Improvement Society, a society composed of ladies and gentlemen interested in the beautification of our public park, and is now more attractive than ever before.

At the present time there are quite a large number of cases of intermittent fever, but it is generally of a mild type, and the patients recover rapidly under proper management.

BRIDGEWATER—DR. BENJ. E. BOSTWICK, *Health Officer*.

There has been one epidemic of measles during the spring, the source of which was traced to an adjoining town. All the cases were severe, having pulmonary complications. Some few cases later, not as severe.

No other contagious disease reported. The schools and public building are in good sanitary condition.

Water supply good.

BRISTOL—DR. W. W. HORTON, *Health Officer*.

The town, as a whole, has been quite free from sickness, except from the epidemic of scarlet fever last winter and of measles this spring.

There were something over two hundred cases of measles reported. Nearly all were of a mild type, there being only two deaths. The measles were imported direct from Hartford. During the winter there was an outbreak of scarlet fever, over one hundred cases being reported. It seemed to be confined to no particular district of the town. Most all the cases were very light. Origin of scarlet fever not ascertained. As soon as a case of scarlet fever was reported, the house was visited and the patient isolated and other precautions taken to prevent contagion. The families that were quarantined, as a general thing, submitted with a good grace to the inconvenience and aided the health officer all in their power to check the spread of the epidemic. Several cases of diphtheria of a very mild type showed themselves throughout the whole year.

Only one or two cases of membranous croup have been reported.

Whooping cough has just begun to show itself and bids fair to become epidemic.

Several cases of typhoid fever have been reported.

Garbage is carted away to a remote public dumping ground owned by the town.

One year ago a system of sewers was opened and nearly every house has been connected therewith. The main sewer empties into sewer-beds prepared for the purpose upon a sandy plain, in the southern part of the town, and so far has worked very nicely.

There is no public provision made for the care of contagious diseases.

All the school-houses are in as good a sanitary condition as



they can be made. During the past vacation every school-room has been thoroughly fumigated. Other public buildings are in a like sanitary condition.

The water supply for the town comes from reservoirs situated among the hills, which are fed by springs and brooks of the purest water.

No public work of sanitary influence has been undertaken during the year. We trust our milkmen to supply us with pure and healthy milk.

BROOKFIELD—DR. J. F. SMITH, *Health Officer*.

The number of contagious and infectious diseases reported to me during the year was as follows : measles 7, scarlet fever 3, whooping cough 12, and typhoid fever 1. No other contagious or infectious disease reported. The origin or source of these diseases which have been reported has, in most cases, been determined. Most of the cases of whooping cough were contracted at school, being brought into town from the surrounding villages. The one case of typhoid fever came direct from Waterbury, and most of the cases of measles from Newtown. In all these cases the disease was kept confined to the family in which it was prevalent : rigid disinfection and fumigation being practiced in all cases.

Although the death rate during the past year has been unusually high, not a death has occurred in our midst from a zymotic disease. From the foregoing it will be seen that while we appear to have a high death rate, yet by eliminating the accident, the suicide, and the premature birth, the figures will compare favorably with those from other parts of the State.

Brookfield being a country place, furnishes little cause for complaint in reference to the disposal of garbage and sewage. No complaint has been received. Milk supply is produced at home, and no trouble exists from that source.

During the past year, ending Aug. 31st, 1896, and before the beginning of the fall term, all of the several school districts were visited and the school-houses inspected and fumigated, in compliance with the law.

The number of nuisances abated during the past year was 4, and in disposing of these cases the health officer received the hearty coöperation and support of the parties interested.

The general sanitary condition of the town is excellent.



BROOKLYN—DR. ALFRED H. TANNER, *Health Officer*.

I have the pleasure of reporting an unusual degree of health during the past year.

There was one complaint of nuisance, which was removed upon notice being given.

Contagious diseases reported : measles, 10 ; whooping cough, 9 ; typhoid fever, 2.

Other topics :—

The garbage is usually composted.

Sewage is into vaults and surface drains.

There is no public provision for the care of contagious diseases.

Sanitary condition of school-houses and other public buildings fairly good.

The water supply is from both wells and springs.

There has been no public works of sanitary influence undertaken during the year.

No public precaution in regard to milk supply.

BURLINGTON—MR. JOHN LUBY, *Health Officer*.

During the year there has been reported to me 4 cases of scarlet fever and 3 cases of measles. No other contagious diseases have appeared.

The method of garbage disposal is the same as in other country towns, by plowing and burning.

The public buildings are in good order. School-houses have been kept clean by whitewashing and airing.

The supply of water is from springs and wells. The water is good.

The ice is taken from private ponds and the Farmington river.

CANAAN—DR. FRANCIS S. SKIFF, *Health Officer*.

There have occurred

*Measles* of severe character, number of cases reported 24.

Two cases of typhoid fever. No secondary cases.

A single case of scarlatina. No other infectious diseases.

The water supply from wells and springs.

The sanitary conditions of school-houses as good as can be expected.

The general health of our town the past year has been above the average.

CANTERBURY—DR. JOHN O. SMITH, *Health Officer*.

I respectfully report upon the following cases of contagious diseases :

One case of measles.

Six cases of diphtheria, in two different families, with two deaths. Children from each family attended the same school. The cause was unknown. Both families were quarantined, and the houses and clothing thoroughly disinfected.

One case of typhoid fever, caused by a filthy hog-pen too near the house.

Two formal complaints of nuisances were reported and received prompt attention.

By advice of the County Health Officer, the Peck school-house, where the children from the diphtheretic families attended school, has been thoroughly disinfected.

The sanitary condition of the school and other public buildings is good.

CHAPLIN—MR. FRANK C. LUMMIS, *Health Officer*.

The year has been one of comparative exemption from infectious diseases. Only four cases of scarlet fever, all primary, of a mild type, and none leaving any troubling sequels. I have required strict isolation of the patient until well past desquamation ; daily inunction of the patient with sweet oil and carbolic acid, preceded by a warm carbolized sponge or tub bath when approved by the attending physician ; disinfection of clothing, sheets, pillow covers, furniture, dishes, etc., with either a solution of sulphate of zinc and salt, or carbolized water ; burning of articles of little value, cloths and papers used for nasal and fecal discharges, and dry food left by patient ; burial of stools, urine and moist food, all having been previously disinfected by a strong solution of sulphate of iron.

Three of the cases were in one family and came down within one hour. The origin cannot be positively located, but as the

children had not been away from home, and no known case having been near, I think that it might have been taken from a driver for a sewing machine agent from Willimantic (where a good many very mild cases have occurred) who was playing with the children. He may have unknowingly been in an infected room.

In the other case, the patient had been to Willimantic with a neighbor, who is a truck peddler, and perhaps entered an infected room. These of course are conjectures, but seem the most reasonable ones.

All cases in this and adjoining towns, I learn, are unusually mild.

One mild case of typhoid fever in September.

Physicians are believed to have reported all contagious diseases.

*Garbage.*—Vegetable waste is fed to swine and other stock. There are no slaughter houses, or other places where animal refuse would accumulate.

*Sewage Disposal.*—Exclusively by privies, increasing care being evident each year about their proximity to wells.

The school buildings are all in a good sanitary condition, out-buildings being well removed from windows and water supply. Ventilation is only by windows.

No public sanitary undertakings have been inaugurated during the year.

Milk is largely shipped to Boston; nothing has been done by the health officer in relation to dairy products, except in families where infectious diseases have occurred.

No nuisances have come to my knowledge during the year. This is not from any indifference to the matter, as I find a very healthy public sentiment in sanitary matters generally.

#### CHESHIRE—DR. M. N. CHAMBERLIN, *Health Officer.*

Cheshire has passed through another year without the occurrence of any epidemic disease, though there has been a slight increase in the number of malarial cases over those of last year.

Only one case of scarlet fever, near the extreme northern limit of the town. Diligent inquiry failed to satisfactorily account for its origin, though it seemed probable that the contagion might have been transferred from an adjoining town by an intermediate party who did not himself have the disease.

One case of diphtheria contracted in Waterbury.

One of typhoid fever, origin uncertain. The patient however, two weeks before the commencement of the disease, attended a funeral in an adjoining town where typhoid fever was the cause of death.

No cases of other contagious diseases.

The methods of garbage and sewage disposal are the same as noted in former reports. When opportunity offers the health officer warns against the dangers from cesspools improperly constructed, or in the vicinity of a water supply.

During the month of August last, an inspection of the school-houses was made. Generally speaking, all were found in good condition, though some recommendations for improvement were made in nearly all cases. The health officer has reason to believe that his suggestions will receive due consideration and be complied with by the committees of the different districts.

The water supply from wells and springs is reasonably free from contamination. Two complaints have been received by the health officer, and the causes of complaint duly removed. The usual precautions have been taken in regard to contagious and infectious diseases.

The customary disposition has been made of the bulletins of the State Board of Health. Through the kindness of the acting school visitor, the pamphlets on school hygiene, and those of the state on consumption, have been distributed to the schools—also on the latter subject, those of the Philadelphia Society for the prevention of consumption. The especially valuable paper on typhoid fever, published by the State, has also been given to those interested.

A pamphlet on the construction of school-houses, issued by the Pennsylvania Board of Health, was given to each member of a special committee appointed to erect a new high school building. The circular on precautions to be observed in the sale of paris green and other poisons, was distributed to all store-keepers in accordance with orders from the county health officer.

CHESTER—DR. S. W. TURNER, *Health Officer*.

During the months of April, May and June, about fifty cases of measles were reported. In addition, there were a number of mild cases, not attended by a physician, and no report was made of them. The disease was introduced from Deep River, the next

village south of us. Some severe cases, but no deaths, and no serious complications.

One case of typhoid fever was reported in August. Nothing very objectionable was found on the premises except the water, which was from a spring, near the road, over which an old barrel was placed, and which received more or less drainage from the street. The ordinary regulations were enforced—the patient is recovering, and no new cases are reported.

Malarial diseases prevailed to a greater extent than in previous years, requiring long and vigorous treatment. One patient of sixty-five years, after two ordinary chills, without any physician, had a very severe congestive chill, with profound coma, and apoplectic symptoms. The patient had prompt and active treatment, but died in thirty-one hours after the attack. Not much attention was given to the disposal of garbage or sewage. The school-houses have been thoroughly cleansed and put in first-rate sanitary condition. Other public buildings are in good condition. The water supply is mostly from wells, or from springs on the hill-sides, and is usually pure.

The milk supply is supposed to be in good condition.

It is a matter of regret, that owing, doubtless, to misunderstanding of the intent of the laws concerning the public health, persons of whom complaints are made, manifest more or less indignation towards the complainant, and still more toward the unfortunate person whose duty it is to see that the laws are properly enforced.

Every good citizen should cheerfully coöperate with the health officer, to make not only his own, but his neighbor's, premises healthful, and keep both the streets, ponds and streams in the very best sanitary condition.

Only one case of typhoid fever was reported during the year.

In the condition of the streets marked improvement has been made. There is need of more ; the remains of shell-fish, and refuse vegetables, from the luscious melon to the decaying cabbage, are daily seen in our streets, in violation of the "Regulations concerning Garbage." It is hoped that this will be avoided in the future, without the necessity of individual notices to the offenders. The condition of the school-houses was found to be far from satisfactory in a sanitary point of view, and the new School Board has done an excellent job in house-cleaning.



The places where our teachers and children spend a large part of the year should, with their surroundings, be kept in the very best condition as regards cleanliness, light, heat, and water. This town, with natural features of unsurpassed beauty, should be a model of health and purity; with the coöperation of all good citizens, it will be.

CLINTON—DR. H. S. REYNOLDS, *Health Officer*.

*Measles*.—About fifty cases. Mild type; the latter part of spring. One death.

*Scarlet Fever*.—One case. Brought from Springfield, Mass. Mild.

*Diphtheria*.—One case. This was reported to Registrar, in death certificate, as inflammation of tonsil and trachea. Upon investigation it was found to be a malignant case of diphtheria.

*Whooping Cough*.—A few cases. Brought from Springfield, Mass.

*Typhoid Fever*.—One case, reported in August. Recovery. No other case developing.

*The Garbage*.—Disposed of by having competent help about premises.

*The Sewage*.—Sink drains and surface of ground.

Sanitary condition of school-houses, good; thoroughly cleaned and fumigated.

Sanitary condition of public buildings, good.

*The Water Supply*.—Wells and cisterns, most of them good.

COLCHESTER—DR. M. W. ROBINSON, *Health Officer*.

The past year has been one of exceptional freedom from contagious or epidemic diseases. There was one case of scarlet fever in April, in the borough, which was closely quarantined, and made a good recovery—and no secondary cases resulted. Thorough investigation failed to determine its origin.

In May, one fatal case of diphtheria was reported (also in the borough), in the person of a child brought from Brooklyn, N. Y., and taken sick on its way here. But thorough quarantine and disinfection prevented the development of new cases. The promptness of the families in these two cases to adopt every precaution recommended, kept these much-dreaded diseases in check. When families will coöperate willingly with their phy

sicians and the health officer, the terrors of the contagion of infectious diseases will be greatly lessened.

The surroundings of the three railroad stations have been inspected, and all suggestions adopted which might add to the comfort of the traveling public.

The several school-houses have been inspected, and thoroughly fumigated and cleansed.

The alms-house and surroundings have been looked after, and I find the condition and management faultless. The inmates seem contented and well cared for and their apartments and persons clean and well kept.

The uniform willingness of all to receive and adopt suggestions, regarding the abatement of nuisances, and of all matters pertaining to the public welfare, has made the duties of the health officer a pleasure, instead of a source of anxiety and worry.

COLEBROOK—MR. H. L. CULVER, *Health Officer*.

Only one mild case of typhoid fever.

No other infectious diseases in the town during the year.

We have had but four deaths in town since January 1, 1896.

One case consumption.

One case cancer of the liver.

The other two deceased were old people.

*Garbage*.—We have no general method.

*Sewage*.—Each family regulates its own.

*School Houses*.—Condition good.

*Water Supply*.—First-class. Springs and wells.

COLUMBIA—MR. WILLIAM H. YEOMANS, *Health Officer*.

The health of the town during the past year has been unusually good. Of the list of contagious diseases, only one case of scarlet fever has occurred in the town. The patient was placed under strict quarantine. Upon recovery the house was thoroughly fumigated and no secondary cases occurred. It was impossible to discover the source of the case. During the year the death rate has been less than in many previous years.

The law creating town health officers, whose duty it is to report annually to the town, is believed to have worked beneficially in this regard. The attention of the public has been turned more directly to subjects of sanitation, through the town

reports, and the effect has not been without fruit. It is believed that, as a rule, better sanitary conditions have resulted. It is believed that more attention is paid to the disposal of garbage and sewage. While it may not be claimed that filth of itself is a generator of disease, it cannot be too forcibly impressed upon the minds of the public that filthy conditions are especially adapted to the culture and transmission of infectious diseases. If disease germs float in the atmosphere, disease might occur under the most favorable conditions; but if artificial conditions are unfavorable to the propagation of these disease germs, then the danger of disease is diminished.

The three most important points are the disposal of garbage, the sewage from sink drains and attention to privy vaults. Ventilation should not be lost sight of; the importance of pure air cannot be overestimated.

While the sanitary condition of the school-houses in town are fairly good, they might be improved, although we believe that nearly all are supplied with necessary pure air. The sanitary conditions of other public buildings appear to be sufficient. In the discharge of our duty we have ordered the vaults of privies connected with school-houses to be well emptied.

Nothing of public undertaking in the line of sewers, drainage, public water supply, or establishment of public parks has occurred in this town.

The water supply is from wells and natural springs, and is believed to be good, unless it is in exceptional cases. The frequent tracing of diseases to a well of impure water, ought to be sufficient to suggest the importance of the removal of any and all conditions that might endanger purity. Every individual should bear in mind that it is better to *prevent* disease than to *cure* it.

In the line of securing a healthy milk product, in several instances animals have been subjected to the tuberculin test. While referring to the subject of milk, it is well for all farmers to bear in mind that the milk of cows may be rendered impure and even dangerous by drinking bad water. Animals should be provided with wholesome water as well as mankind.

With the existence of so many conditions affecting health that are beyond the control of man, it should be the purpose of every one to secure as far as possible the elimination of such conditions as are within control, and to that end the aid of all citizens of the town is invoked.

CORNWALL—DR. JOSEPH A. LIVINGSTON, *Health Officer*.

In November, 1895, every school in town was visited and special effort made to introduce a reasonable plan for ventilation and general suggestions for the improvement of buildings and out-houses.

At different times throughout the year, oral and written complaints have been received about offensive pig-pens, dead animals and slaughter yards, all of which were inspected and nuisances removed.

In July, 1896, upon advice of State Board of Health relative to the fumigation of school-houses where cases of contagious disease had occurred, there being but one such case, the order was given and complied with, though some difference of opinion was held by the district committee as to quantity of sulphur that was ordered burned.

In August, 1896, circular letter No. 78 of the State Board of Health was received and forwarded to those likely to deal in merchandise of the class given.

Contagious diseases for the year :

*Measles*.—13 cases, two contracted from one exposure in Falls Village, one from case in Massachusetts, two unknown.

*Membranous Croup*.—One case (isolated case).

*Whooping Cough*.—Two cases ; came from Stamford.

*Typhoid Fever*.—3 cases ; one origin unknown, two traced exposure to cases in Torrington.

Disposal of garbage and sewage : This being a farming section, all such material is collected by the farmers and used as fertilizers.

Sanitary conditions of our schools are fair, though the majority of the buildings are old.

Our water supply is from springs.

COVENTRY—DR. W. L. HIGGINS, *Health Officer*.

The following is a list of the contagious and infectious diseases which have occurred in this town during the year which ended August 31st, 1896 : measles, forty-eight cases ; scarlet fever, three ; diphtheria, one ; whooping cough, four ; typhoid fever, four ; chicken pox, four ; the itch, two cases ; and body lice, two cases. All the contagious diseases, except measles, have been kept from spreading by quarantine and proper precautions.



Cases of measles were introduced at different times from three sources. The primary cases were quarantined, but in one of them the quarantine was not strictly observed and the result was forty-five additional cases, running through a period of eight or ten weeks. It is a strange thing, but nevertheless a fact, that some of our people actually desired that their children should contract measles. This fact greatly handicapped the work of quarantining the disease, and it was finally abandoned altogether and the local physicians decided to make it a campaign of education on the subject. A large share of the people in this town believe that measles occurs but once in the same individual; that everybody is sure to have it; that it runs a milder course in children, and therefore they would better have it while they are young. During the epidemic here last summer, four of the cases had had the disease before, one of them thirty years ago and three of them only the year before. While it is essentially a disease of childhood, it does not always run a mild course, and together with its complications causes a death rate ranking third among the eruptive fevers of children.

The following rule has been established on recommendation of the county health officer :

“ When a case of contagious or infectious disease shall have occurred, the householder upon whose premises the case has been confined shall, at his own expense, upon the death or convalescence or removal of the patient, disinfect such premises, or so much thereof as the town health officer shall direct, together with such articles as have been exposed to infection, to the satisfaction of the town health officer.”

All of the school committees were directed to fumigate with sulphur the school-houses in their respective districts. Aside from the epidemic of measles, there has been less sickness than the average for the past five years.

CROMWELL—DR. CHARLES E. BUSH, *Health Officer*.

During the year ending Sept. 1st, 1896, but four (4) complaints of alleged nuisances have been received and investigated. In three cases prompt and satisfactory compliance with the request for abatement was made.

In the early winter and spring the town was visited by epidemics of chicken pox, measles and whooping cough. It was not possible to trace the origin of these epidemics. The first cases



appeared in the West Cromwell district and were probably brought in from the neighboring towns on the west. The cases of chicken pox and measles ran a mild course. Complications were absent in all cases, and many were not confined to their beds at any time during the course of the disease. Most of the cases of whooping cough ran the ordinary course of this disease. Complications were few and mild and no deaths.

Since July 1st, measles has again appeared and cases are cropping out in different localities at the present time. Most of the cases in young children run an unusually severe course with pronounced pulmonary symptoms and marked liability to complications, especially pneumonia. In all cases the temperature is high,  $103^{\circ}$  to  $105^{\circ}$ . In one case a fatal ending occurred from a complicating pneumonia. Occurring, as most of the cases do, in the foreign population, who speak English but little and understand it less, isolation is difficult or impossible and disinfection often opposed. In all 14 cases have been reported and probably as many more occurred of which no report was made.

Early in January, 1896, one case of typhoid fever occurred. In this case the disease was contracted in New Britain. Strict precautions were taken to guard against spread of the disease and no other cases followed.

The only method of sewage and garbage disposal is emptying upon the surface at the most convenient point. The village is by Nature well favored for disposal of sewage by piping and sewers, but to this point we have not yet advanced.

The public buildings have been inspected, as usual, and found in as good condition as possible under existing circumstances. Some of the suggestions made in the report of last year were followed. There still remains much that might be improved in the condition of the closets and outbuildings. Especially to be urged is the free use of disinfectants and deodorizers in the vaults and the more frequent removal of the contents thereof.

The water supply of the town is wholly from wells and cisterns and is in most cases good.

CITY OF DANBURY—MR. WM. HUMPHRIES, *Health Officer*.

I have had reported to me during the year the following: measles, 202; scarlet fever, 41; diphtheria, 65; whooping cough, 7, and typhoid fever, 53 cases.

With the exception of the slight epidemic of typhoid fever in September, and that of measles in May and June, we have been comparatively free from any disease. There were very few deaths from contagious diseases.

As to the disposal of garbage, the city owns four acres of land a mile and a half from the city limits, between the mountains. Here all the garbage is dumped, spread over the flats and then it is covered over with earth as fast as it is dumped, and in this way it is kept covered and clean all the time.

The sewage has been disposed of by emptying into Still River, but now the city has almost completed a filter bed on land purchased for that purpose, and expects to get rid of the sewage in that way.

In the case of contagious diseases, the patient is isolated and the house quarantined as closely as possible until the danger from contagion is past.

The sanitary condition of the schools in the city cannot be excelled anywhere. The ventilation is good and the closets and drains are kept in good condition. We court inspection of the city schools at any time. The public buildings are all in good condition; the alms-house is second to none in the state. The hospital is well kept and is doing a great good; the public library and city hall are in good condition.

The water supply is plentiful and good. The milk supply of the city is very good. The chief sanitary work during the year was the construction of a mile and a quarter of outfall sewer to reach the filter beds owned by the city.

#### TOWN OF DANBURY—DR. G. E. LEMMER, *Health Officer*.

Of contagious or infectious diseases I have had reported to me during the year: typhoid fever, 10 cases; diphtheria, 5; scarlet fever, 4, and measles, 30 cases. With the exception of measles the town has been fortunate in that it has had by far fewer cases than usual of any or all diseases that are born of direct contagion or of filthy surroundings.

In regard to measles, the epidemic that spread throughout the state, paid us a brief visit during the months of May and June. In the Middle River district the number of cases became so great that I was forced to close and quarantine the local school-house for a week and a half beginning May the 28th.

In the Great-Plain district the disease became epidemic, but at a time coincident with the beginning of the usual summer vacation, only five cases having been reported up to the time of closing school. In regard to the results of the disease I found but one case resulting fatally, and that one an adult. In pursuance of a suggestion issued by the State Board of Health, I disinfected all of our district schools, ten in number, prior to the opening of the fall term.

In the disposition of garbage and the refuse from meat markets and fruit stores, etc., the city dumping ground is being used by many of our city dealers who throughout the preceding year were accustomed to make a dumping ground of whichever one of our back roads chanced to be nearest their respective places of business.

The law relative to this matter has been violated repeatedly, however, during the past year, and many indignant protests have come to this office from farmers and other residents outside the city limits. As this pollution of country road-sides is in most instances done secretly after night-fall, it becomes difficult to gather evidence sufficient to warrant an arrest, but as the residents along said roads have come to recognize how effective will be the protection afforded them under the present health laws on their submitting a formal complaint, one witness only being required, I am hopeful that the coming year will see the ending of this dangerous and offensive nuisance.

Regarding the disposal of horse and cattle carcasses, but two complaints have been entered during the year. The owner of the land on the road running south from Bushy Hill, where the greater number of said carcasses are carried, has complied fully with the law during the year.

In regard to our much-vexed question of the safe disposal of sewage, the problem seems to be fully solved in the purchase by the city of 200 hundred acres of land in the Stony Hill district, to be converted as the city's wants require into filter beds. At the present writing 30 acres are being prepared under competent management, and by the first of May, '97, at the latest, will be in proper working order.

As to the school-houses in the outlying districts, if a thorough cleaning and disinfection will prevail against disease germs, they will open this fall term free from any menace or danger to those attending. I must protest, however, against the manner in

which a few of the committees of said schools attend, or rather fail to attend to the cleanliness of the out-houses under their charge, and if the coming year brings no improvement in this regard, it will be very much to the financial discomfort of the districts in question.

As to our water supply, I am satisfied that no better or purer plant obtains throughout the state.

DARIEN—DR. WM. FREEMAN FRENCH, *Health Officer*.

I respectfully present to you my third annual report as Health Officer of the Town of Darien, for the year ending August 31st, 1896, as required by law.

*Health Regulations and Quarantine Rules.*—Besides those regulations established by the town health officer, the following additional regulation was printed in a newspaper circulated in our town, as follows: "When a case of contagious or infectious disease shall have occurred, the householder upon whose premises the case has been confined shall, at his own expense at the death or convalescence or removal of the patient, disinfect the premises or so much thereof as the town health officer shall direct, together with such articles as have been exposed to infection, to the satisfaction of the town health officer."

*Measles.*—During the early months of this year our town was visited by a very extensive epidemic of measles. I have recorded 140 cases. They were for the most part mild in character. The first case became infected in a neighboring town. As the period of incubation is about two weeks, the parents did not apprehend any danger and allowed the child to attend school, until the cough and eruption caused the teacher to suspect the nature of the trouble. From this one case there developed within two weeks all those exposed in the school, and they in their turn gave the disease to the other inmates of their homes, the very young children and the grown up members of the family. The original case was placarded. I have been unable to find anyone taking the disease without direct exposure, so that the theory of ignorant people that the disease is in the air, is not borne out by actual experience. To keep away from infected houses is a sure preventative against contracting the complaint. We had no secondary cases. There are a few facts for people to bear in mind: that all ages are susceptible to the measles poison; the reason that adults seem



exempt from taking the disease is that they have already suffered while young. Our epidemic proved that one attack will not absolutely prevent a second; many had it a second time, often after only a short interval, and in some cases the second attack happened so near the first as to constitute a true relapse. There were no deaths in our epidemic, although some came very near dying. All should know that oftentimes a condition of the system is left which appears to favor the occurrence of secondary disease, especially in those of a weak constitution, and true acute tuberculosis or catarrhal pneumonia follows with alarming frequency, causing either prolonged ill health or a fatal termination.

*Scarlet Fever.*—Two cases of the mildest character. The children had visited a house where there were a number sick with epidemic tonsillitis.

*Diphtheria.*—Four cases in all, one death. Two cases appeared in one house; origin, filthy condition of living room. This apartment was used by a family of six for kitchen, dining-room, nursery, bed-room, and also to raise canary birds, at least a dozen large cages being fastened to the walls. The third case happened in a little one-story house located in a barnyard; origin of case evident. Fourth case: origin, clothes brought from a house in a neighboring state where there had been an outbreak, although disinfection by sulphur fumes had been practiced, and four weeks passed before case developed. All the diphtheria cases were placarded. After death or recovery the houses were disinfected and fumigated.

*Whooping Cough.*—Fifty-nine cases reported; no deaths. Origin, a child caught the disease out of town and brought it to the school. No report was made until the whole school was infected; as the teacher said, "he thought it was only a cough that was going around."

*Typhoid Fever.*—Seven cases; one death. The three cases late last summer were a sequel to the Stamford epidemic. The June case of this summer was imported from New York. One of the July cases happened in the north part of the town near the Stamford line. No report was made to your health officer until after the death certificate was filed with the registrar. Of the two remaining cases no positive cause could be assigned. All cases were isolated, the excreta carefully disinfected with milk of lime.

*Sanitary Inspection.*—Fourteen complaints for the abatement of nuisances were received by the health officer, and fourteen



orders were issued for the removal of the same, and from these orders no appeals were taken.

*Methods of Garbage Disposal and Results.*—In parts of our town, with houses scattered, the disposal of garbage is not a vexed question, for every farm has a place at a distance from the water supply, and far enough away to prevent the odor from reaching the house, where it can be buried, fed to the pigs and chickens; or deposited in a manure pile in safety. It is a different matter when the houses are close together, with small door yards, to properly care for the accumulation of garbage. It then becomes a nuisance. The ideal way of destroying the combustible portions is by means of cremation. I think a simple apparatus has been invented that can be attached to every kitchen stove to burn the refuse.

*Methods of Sewage Disposal and Results.*—In Darien the methods of sewage disposal, excluding the sewer from the Soldiers' Home to Long Island Sound, which is connected by half a dozen houses, is by surface discharge and cesspool. In sparsely settled districts, when the discharge, which consists mainly of sink water, is on the surface, and far enough away from the water supply, and at a distance where the odor is not appreciable, no great fault can be found. The cesspool is a prevalent nuisance. A badly constructed cesspool is a constant menace to health, for its contents are always in a state of putrefaction. When leaky, the infecting material easily finds its way through the soil into cellars and drinking water, and the gas into the rooms of the houses.

*Sanitary Condition of School-houses.*—All the school-houses have been put in good condition during the past vacation. They were cleansed by washing the walls, floors and seats. Every room was fumigated with sulphur fumes, as contagious diseases had existed in some of them the last term.

*Water Supply.*—The water supply of the town is by wells dug and driven, and springs. The quality on the whole is very good, and will compare favorably with surrounding places.

*Milk Supply.*—We have no sanitary inspection of the milk supply, therefore everyone having a dairy is a law unto himself.

CITY OF DERBY—DR. C. T. BALDWIN AND DR. GEO. L. BEARDSLEY, *Health Officers.*

The diseases reported were seven cases of typhoid fever, a few cases of whooping cough, and one of diphtheria.

The usual precautions of isolation, disinfection and fumigation were rigidly practiced.

There were also about 75 cases of measles reported, although no exact record of them was kept.

A considerable number of complaints of nuisances has been made and due attention given them. Among them was one of a man who undertook the construction of a compost heap in his cellar by allowing his sink pipe to discharge upon a pile of decaying garbage.

The N. Y., N. H. & H. R. R. Co. have abolished the old outside privies which so long disgraced their passenger stations and have constructed modern water-closets in their three depots with satisfactory sanitary arrangements.

#### DURHAM—DR. E. A. MARKHAM, *Health Officer*.

In the town of Durham there has been no infectious disease, except measles (two cases) and typhoid fever (three cases), in 1896. In September, 1895, there were three cases of typhoid fever in one family, caused by drinking water from a polluted well. There were no deaths.

In July, 1896, a case of measles came on a visit from Middletown, and the nurse was taken a month later. No other cases.

Garbage is almost invariably saved and fed to swine and fowls, with no visible evil. Sewage is thus lessened and is usually led off in private drains on the owner's premises with no bad results known.

The school-houses have all been cleansed and put in good repair, and the town partially so. The churches (the only other public buildings) take pride in cleanliness, as it leads to godliness.

The water supply in the two villages is furnished from two springs, one to each village: Durham, by a constant flow through pipes of the Aqueduct Company, by the force of gravity, which is noted for purity; and Durham Center pumped by windmill. The outlying districts depend generally upon wells, which are usually good—though there are six at least private pipes from springs, and some of these furnish several families. They are very good in quality.

There are no public works, in sewers, parks or drainage. Private owners of part of the swamps contribute towards keeping their drainage ditches open and free.

There are two creameries of note, one supplied by farmers in general and the other private. They test their supply of milk. The family supply of milk is from the family cow, which has good pasturage, and often supplies the next-door neighbors, if they fail to have one of their own.

EASTFORD—DR. E. KEYES ROBBINS, *Health Officer*.

We have had no epidemics. Eastford is, in my opinion, one of the most healthy towns in the State, being a desirable location to enjoy good health and long life.

*School Buildings*—Their sanitary condition is not what it ought to be, and would urge that our district committees in the several districts see to it, that the rooms and privy vaults are properly cleaned, and all of their surroundings are kept in a good sanitary condition.

*Public Buildings*—Sanitary condition could be improved.

*Water Supply*—None better, it being from wells and springs, a safe and abundant source of pure water.

I would recommend and urge every family in town to look after their sinks, drains, privy vaults, garbage and sewage disposal, and with our town officers assist me in the maintenance of a good sanitary condition of their premises and all our surroundings.

EAST GRANBY—MR. WM. A. FOSTER, *Health Officer*.

The town for the past year has been exceptionally favored. There have been three cases of typhoid fever of recent date which were reported to have been contracted in Hartford.

The sanitary condition of the school-houses is good, being situated on high ground, and being accessible to good water.

Garbage disposal is considered a personal matter, and is satisfactorily taken care of. Sewage disposal the same.

The water supply is from wells and is very fine.

There has been no public work of sanitary influence.

EAST HADDAM—DR. M. W. PLUMSTEAD, *Health Officer*.

During the year there has been no epidemic of any contagious disease in the town, except whooping cough.

In April there were three cases of measles in my practice; one was contracted in Middletown and the other in Hartford. They were at once quarantined and no new ones came from them.

In Millington I found there were two cases of scarlet fever in one family in May. They were at once quarantined until all danger was passed, and there were no new cases developed from them. From what I could learn, the two cases of scarlet fever were contracted in the house they lived in. The family had been overhauling some old things in the attic which had not been disturbed for years, and there had been several cases in this house some years before.

In February there was one case of diphtheria, and it was contracted in Hartford. The case was a mild one, at once removed to the attic, a strict quarantine kept up and no new cases developed.

During the months of February and March there were a large number of cases of whooping cough. These originated from a case brought from out of town. The children in the family were allowed to go to school and as none of the cases were reported to me it soon became epidemic.

During July and August there were a large number of cases of intermittent fever, in fact more than has been known here for years. The greater number of cases have been in the vicinity of the new macadam road, which was being built at that time. The cause may possibly be attributed to the exposure of the new earth and excessively high temperature.

The school-houses and public buildings are in a good sanitary condition.

The water supply is from wells.

EAST HARTFORD—DR. E. H. GRISWOLD, *Health Officer*.

All the physicians of the town have promptly reported the contagious diseases under their care, thus making it possible to check such diseases before they became epidemic. There have been reported sixty cases of measles, fifteen cases of scarlet fever, sixteen cases of diphtheria, eleven cases of typhoid fever, and four cases of membranous croup. The type of these diseases has been mild and the mortality low.

*Public Buildings*—The school-buildings are in good sanitary condition. The out-houses connected with them have not been kept in the cleanly condition that they could and should have been.

*Ice and Water Supply*—Until two years ago much of the ice consumed in the town was taken from the Connecticut river below



the sewers. This has been entirely stopped, and the supply comes from sources far better than the average. It is the opinion of the writer that much of the typhoid fever in Hartford comes from the germ polluted ice used in that city, that is cut directly below the sewers in the Connecticut River.

Many of our residents use the water piped from Salmon Brook in Glastonbury. The quality is most excellent. But, as more and more is used, the question stares one in the face, "how long an abundant water supply can be used with safety where no sewers exist?"

If the six thousand dollars or more annually expended for the abnormal organization called our "fire department," could be turned into the building of sewers, much benefit would be derived, and doubtless many lives saved. But this change can hardly come about so long as men are vote-hunting.

Very properly, the committeemen of the schools have prohibited the holding of public dances in the school buildings. Such dances were a possible source of contagious disease, and the stopping of them is highly commendable.

A source of much annoyance to the health officer, and many others in the town, has been the keeping of large droves of hogs by farmers. In three instances, at least, from fifty to seventy-five animals have been kept in filth and fed on filth, much to the discomfort of the surrounding community. This has been remedied to a certain extent. One man has been arrested and heavily fined. The number kept in the future will be limited to a few.

*Nuisances.*—There have been reported over one hundred nuisances in the shape of foul cesspools, privys, sink drains, pigsties, etc. In some instances I have found on investigation that the complaints have been instigated by a desire to avenge some imagined wrong of a neighbor, and the health officer is considered a fit tool to use to accomplish this end. These parties have been informed that the health officer is not paid to do such service, and their resource is civil action in the courts. In all cases where an actual nuisance has been found to exist, such nuisance has been abated, except in those cases where droves of hogs exist. Some of the parties owning these animals will be prohibited from keeping them another year, and the matter will be closed up in this way.



EAST HAVEN—DR. J. A. HUTCHINSON, *Health Officer*.

During the year ending Aug. 31st, 1896, there has been but one case of contagious disease reported to the Town Health Officer. This was scarlet fever and occurred on the Foxon road, in a family of six children ; none of the others, however, contracted the disease. Diligent efforts were made to discover, if possible, the origin of the illness, but without success. In obedience to instructions received from the State Board, I notified the merchants of the town that great care must be exercised in the sale of poisons, and instructed them in regard to the law governing such sales. The school-houses are in good order. The Foxon school was in good condition at the time of my visit recently.

EAST LYME—DR. FREDERICK H. DART, *Health Officer*.

Inspection of public buildings, including schoolhouses, shows them to be in a better sanitary condition than they were last year.

As privies, cess-pools and wells are in many cases in close proximity, a different water supply should be considered.

In February a mild case of diphtheria came here from Ivoryton, Conn., and infected two families, which were quarantined for several weeks, with much inconvenience and expense. All of which, together with the closing of two schools, rendered necessary by these cases, would not have been necessary had the first case been isolated in Ivoryton a proper length of time. In June another case of diphtheria escaped quarantine and came here from New York City. This was isolated and no more cases resulted. There have been three cases of typhoid fever occurring in East Lyme, two of which were imported. The source of infection of the third case is not yet evident.

East Lyme, in common with most Connecticut towns, has had a larger number of malarial fevers than usual.

There have been a few cases of measles imported, with no spread of the same.

EASTON—DR. BENJAMIN W. WHITE, *Health Officer*.

Infectious diseases occurring in the town of Easton during the year ending August 31st, 1896, have been few in number, and most all of them mild in character.

I have received report of only three cases of measles. Two

persons in one family and one in another were the only ones attacked with the disease, and I think people are more cautious about observing the rules established to control the spread of all infectious or communicable diseases than they have been heretofore. Consequently, suffering from these has been very limited.

One case of scarlet fever was reported to the Health Officer on the 23d day of last June, and this is all of that disease we had to contend with. I quarantined the case, and in this measure I take pleasure in stating that the family gave the most cheerful and efficient kind of assistance in the management of every detail of isolation of the patient and nurse. The disease was in this manner kept within the house, which was thoroughly fumigated after disinfection of the bedding, linen, etc., and after the recovery of the patient had been complete.

One case of diphtheria occurred in a family living in Platts-ville. The usual plan of quarantine and fumigation and disinfection of house and furnishings was carried out and the disease was not communicated.

Typhoid fever developed in one person only. The case was quarantined, dejecta, the patient, bedding, linen, etc., were constantly disinfected, and a foul surface privy was abolished and the location occupied by it thoroughly treated with fresh earth and lime. No more cases developed. No other cases of a communicable character developed within the town.

No complaints of nuisances have been received at this office during the year. I believe garbage is generally fed to the stock, and such as cannot be utilized in that way, I advised to be burned. Sewage is, as a rule, thrown upon the surface of the ground, where it quickly becomes oxygenized and rendered harmless. I believe this method produces the best results.

The school-houses were left in a good condition last year.

No precautions have been taken in regard to the supply of milk, because no law has been created to cover its inspection. This article of diet, upon which we depend so largely in the feeding of infants and invalids, should be offered for sale only after every detail of cleanliness at the stables and dairies have been carried out.

This effort to obtain strictly pure milk should be pursued only by persons competent to demand a polished cleanliness of all vessels used for conveying and distributing milk; to order the strictest sanitation at the stables and dairy and to destroy all diseased or unhealthy cattle from which milk is taken.

EAST WINDSOR—DR. H. O. ALLEN, *Health Officer*.

There has been no epidemic in the town during the year. A large number of cases of measles have been reported ; most of the cases, however, were at the Hartford County Temporary Home, over sixty cases occurring within a space of three weeks. The cause of this outbreak was due to the fact that a child was returned to the institution after having been exposed to the disease. There were no deaths.

About ten cases of diphtheria have occurred in the town, with one death.

Three cases of typhoid fever reported, with one death, the person who died having been in feeble health for some time before being attacked with the fever.

A few cases of whooping cough have come to my knowledge ; also a few cases of scarlet fever, in mild form, with no deaths.

The school-houses in town were placed in good sanitary condition at the beginning of the year, and have been kept so.

The water supply throughout the town is mostly by wells or springs. The village of Warehouse Point is supplied by the Thompsonville Water Co. The village of Broad Brook is supplied from the Broad Brook Co.'s reservoir, with universal satisfaction.

A portion of Warehouse Point village has been *sewered* during the year, with such favorable results that it is hoped more of the village may be included in the system before long.

ELLINGTON—DR. E. T. DAVIS, *Health Officer*.

There has been no serious epidemic of contagious disease during the year. A few cases of measles occurred during the winter months, but by careful isolation of each case the spread of the disease was limited to the primary case or to the families where it first appeared.

There have been reported during the year only one case of diphtheria, only a few cases of whooping cough, and only two or three of typhoid fever. The death rate has been comparatively small.

The sewage disposal of the town is mostly by cesspools or shallow wells dug in the ground, which receive the waste from sinks, etc.

These cesspools are too often found near the wells that supply the water for family use, and I fear the sewage often contami-

nates the water of the well. Often these cesspools have no means of ventilation except through the conducting-pipe to the sink, where the foul gases can readily find access to the dwelling and contaminate the air of the whole house.

The sanitary condition of the school-houses is fairly good in most cases. I have had all of the school-houses in town, where schools are held, disinfected with the fumes of sulphur during the vacation just past. The ventilation of some of the school-houses is not what it should be, but hope it will be improved in the near future.

The water supply of the town is fairly good, with the exception of that from wells that are contaminated by sewage, etc.

ENFIELD—DR. GEO. T. FINCH, *Health Officer*.

The town of Enfield has reason to congratulate itself on account of a comparative immunity from acute disease during the past year. We have had no epidemics, and the list of cases of contagious diseases is commendably small considering the size of our town, the crowded condition in certain parts, and the ease of communication with other parts of the state. According to the returns of the attending physicians, there have been in the town seven cases of measles, six cases of scarlet fever, seventeen cases of diphtheria.

The cases of measles were scattered; no two occurring in the same family. In one or two cases the disease was supposed to have been contracted while the patients were out of town, on visits. Of the remainder, the source of contagion was not determined. Of the scarlet fever cases, three occurred in one family, and all developed at practically the same time. The other cases developed in different parts of the town and at widely separated intervals, no apparent connection existing between them, and nothing connecting them with the earlier cases. The majority of the diphtheria cases show a common source of infection. The origin of the initial case could not be discovered, but this case, being allowed to attend school two or three days before discovery, gave rise to fourteen other cases. The source of contagion in the two remaining cases was undiscovered, although in one case the surroundings were very unsanitary. Our town is a center of trade for the four different towns surrounding us. We send out meat-carts, baking-carts and fish-carts. These circulate



freely through the adjoining towns. It will appear that this sort of inter-communication offers a large field for the transmission of infectious material. Many unexplained cases can be reasonably accounted for through this channel. Our death rate has not been above the average; although some improvement is shown in the removal and disposal of the garbage, we are not proud of our methods as employed to effect these results. The collection of garbage is a private enterprise, families paying a fixed sum per week for the service. No compulsion is employed; a few take advantage of the privilege and many do not. The garbage, when gathered, is deposited on a piece of ground where it does no harm. The town of Enfield has quite an extensive system of sewers. They are well constructed and are generally used. No attempt has ever been made to dispose of our sewage, except to embark it upon the friendly waters of the Connecticut river. What the results of such disposal have been, I hesitate to say.

On occasion, when a case of small-pox has occurred, temporary provision has been made for its isolation and care, but no permanent place has ever been maintained. Our school-houses are in good sanitary condition. The thirty-eight school-rooms of the town have been thoroughly cleaned and fumigated; the closets have been attended to; the plumbing has been inspected; and every effort has been made to insure the comfort and safety of the children. Our other public buildings are kept in good sanitary condition.

The water supply of the town of Enfield is unsurpassed by any in the state or country. Analysis shows that it is not only of a high standard of purity, but that the proportion of mineral salts is such as to adapt it perfectly to all uses.

The supply, for the most part, is from living springs. Care is exercised to conduct the water from the spring to a small reservoir, whence it is pumped to a stand-pipe for distribution. Practically, the water is never ponded, but is always in motion. It has been remarked that no case of typhoid fever has ever occurred in a family using town water. No great work of a sanitary nature has been undertaken during the past year. The subject of milk supply is, to my mind, the most important of all topics suggested by the State Board of Health. It is far-reaching, and of such universal interest as to overshadow all other matters towards which sanitary laws are directed. A case of small-pox is a menace to the community, and the law provides means



whereby the community can be quickly and effectually protected from it. Diphtheria, scarlet fever, defective sewers, foul sinks, drains, are all sources of danger to the persons exposed to their influence. But how few in number the lives of those thus exposed appear when we compare them with the vast host who daily expose their lives by using milk from untested cows. Almost every person takes milk into his system in some form, each day of his life. When we realize the frightful extent to which tuberculosis prevails among our cows; when we read from well authenticated statistics the terrible ravages this same disease is making in the human family, killing more than any three other diseases, we are compelled to reason from cause to effect. There is no herd of cows in the state which should not be tested, unless it has been done already. No man should be allowed to sell a quart of milk from an untested herd. A man must label a pound of oleomargarine if he intends to sell it, and, as I understand it, oleomargarine is harmless. A man can sell a can of milk containing a sufficient number of tubercular bacilli to kill a whole generation of babies, and he not only need not label it "Poisoned Milk," but can put up a sign, "Pure Country Milk." While the laws are sufficiently severe, the enforcement is lamentably weak. The people have the correction of this dangerous condition of affairs in their own hands. Just tell your milkman not to leave you any more milk until he can show you a clean bill of health for his herd, and the matter will soon be righted. Enfield has taken no precautions tending to regulate the purity of its milk supply.

ESSEX—DR. C. H. HUBBARD, *Health Officer*.

A few cases of measles, of mild type, have been reported.

Malaria diseases have largely prevailed, and one case of pronounced malaria, terminating fatally, has occurred.

The health officer has sought persistently and faithfully to secure the disposal of garbage by burning and burying; and also sewage disposal, by methods most approved, with a degree of success by no means discouraging.

More attention is given to the sanitary condition of school houses and public buildings, our local Board of Education and others in authority realizing its importance.

Our water supply, which is chiefly from wells, has also received

more careful attention, as householders gain a more intelligent comprehension of its relations to health.

No public work has been undertaken relating to sewers, drainage, etc., yet it is not impossible that certain improvements relating to public water supply will be undertaken in the near future.

Our milk supply is in the hands of careful and intelligent men ; hence no special precautions seems at present necessary.

The work of educating public sentiment up to an intelligent apprehension of unsanitary conditions, and the proper remedies therefor, is a very slow one ; yet each year shows some gain along the line.

It is difficult to obtain written and formal complaints concerning, nuisances, etc., doubtless from fear of incurring the ill-will of the offenders ; but the health officer has received during the year many verbal reports, setting forth unsanitary conditions in various localities, which he has endeavored to rectify so far as possible, although often there is much ignorance, obstinacy and prejudice to overcome.

FAIRFIELD—DR. W. H. DONALDSON, *Health Officer.*

My services have been required in an unusual number of cases during the past year, owing to the prevalence of measles and other contagious diseases. Measles were epidemic from March to June. General disregard of all precautions and regulations caused a more general spread of this disease than was necessary. Probably the forty-eight cases reported were not one-half of the actual number occurring. Most of the cases were of an unusually mild type. The following communicable diseases are reported : measles, 48 ; scarlet fever, 9 ; diphtheria, 14 ; typhoid fever, 4.

Aside from the contagious diseases reported my services have been required in thirty-five cases.

By request of the State Board of Health, the school buildings have been fumigated as a protective measure against the spread of the contagious diseases that have prevailed throughout the state. In addition, the school committee have had the buildings cleaned and, to a limited extent, renovated. While our school buildings compare favorably with those of other towns of similar size, they are not to be boasted of. The sanitary conditions are not of the best, and it is my earnest recommendation that they be remedied without further delay. The toilet arrangements in

most of the schools are shameful both from a sanitary and a moral standpoint. Earth closets could be easily maintained and those for each sex more widely separated. This is a repetition of what I have previously pointed out, but thus far fruitlessly.

By direction of the county health officer an inspection of the schools was made last fall, and the result of my findings was communicated to the school committee, with recommendations. The committee inform me they are unable to comply with them by reason of lack of funds.

A new regulation, controlling the unloading of manure or fertilizers from vessels or cars during the summer months, was put into force May 1st.

The disposal of house-sewage and garbage is growing to be a more serious question each year, especially in the more thickly settled parts of the town. I urge the citizens of the town to study the later scientific methods and give up the old ways of cesspools, foul-garbage heaps and ill-smelling privy-vaults. Substitute for them earth closets, the "Waring system" of filtration or surface distribution for house drainage and the burning or burying of garbage.

The general adoption of these would lead to a vast improvement of our sanitary condition. Information on these matters will be gladly furnished by the health officer.

#### FARMINGTON—DR. S. J. EDGERTON, *Health Officer*.

There has been an epidemic of measles in the town during the year, and two cases of scarlet fever reported.

Diphtheria has broken out in different portions of the town. No origin could be traced. Sanitary conditions in most cases were good. Fifteen cases in all reported; one case of typhoid fever.

No great change in sanitary condition of the town during the year. Several complaints of nuisances have been received and have been promptly abated.

#### FRANKLIN—DR. E. L. DANIELSON, *Health Officer*.

Garbage is usually burned, although a great part of the refuse materials from the houses is eaten by hogs and fowls. Sewage is collected in cesspools, or carried away by drains, both closed and open, to a proper distance. The sanitary condition of school

houses and other public buildings is fairly good, but the people are rather careless about the condition of the outhouses, and need to be reminded. During August I inspected the school-houses and ordered them fumigated, as requested by the State Board of Health. I was unable to see the committee of the Eighth School District, and have since been notified that the outhouse in that school is a nuisance, and I have ordered it abated. June 4th I procured a sample of water from the well of Willie Robinson, in Franklin, Conn., which was said to be contaminated, and sent it to New Haven to be tested.

June 13th I received a reply that the water was contaminated by sewage or drainage, and was not suitable for drinking or domestic use. This contamination was thought to be caused by cattle stabled in a barn situated ten feet from the well, on land owned by M. Shea. I served notice to Mr. Shea to have these cattle removed. He appealed. The case was tried before County Health Officer C. F. Thayer, and was by him vacated.

GLASTONBURY—DR. CHAS. G. RANKIN, *Health Officer*.

The year has been characterized by an unusual prevalence of contagious diseases, but fortunately of a mild type.

There have been reported to the health officer sixty cases of measles. The first case, reported in January, was undoubtedly imported. Eleven cases were directly traceable to this case and indirectly many more.

One reason why the epidemic of measles was so hard to control was the difficulty of making an early diagnosis—the diagnostic point being the irruption, which is often late in appearing. Another reason was the carelessness of those having the measles in going about. One young lady attended an evening party after she had every reason to suppose she had the measles. No death from measles have occurred in our town.

Of scarlet fever there were eleven cases reported, all but one of a mild type. Four cases occurred in one family, where the infection was thought to have been received in clothing sent to the family from New York. There was one death from scarlet fever complicating child-bed fever. No secondary case occurred. Except in the cases mentioned above I was unable to trace the origin of the infection. The children of one family were all sick with scarlet fever, but no physician was called and the identity of the disease was not known until they had recovered. They



were undoubtedly a source of danger at that time ; but so far as known did not spread the disease.

Four cases of diphtheria were reported. They were rather mild in form. No cultures were made to establish a positive diagnosis and as no secondary cases occurred, although others were exposed, there is reason to doubt the existence of true diphtheria in these cases.

Four cases of whooping cough were seen by the health officer. No other were reported. I do not know that any of the other physicians were called upon to treat any of the numerous cases that occurred. Most people consider whooping cough a harmless, necessary evil that must be endured. It is classed by some of the best English and American authorities as a most serious affection, ranking third in point of fatality among children. Parents would do well to consult their physicians in all cases.

Of typhoid fever there were reported five cases. The source of infection was not found in any case.

At the suggestion of the Secretary of the State Board of Health I have fumigated all the school-rooms in town, and while doing that took occasion to examine the school-rooms and their surroundings. I am very glad to be able to report them in much better condition, in most cases, than when I examined them before. Many of the districts take pride in the schools and seem to be willing to make all needed repairs on the buildings, and the condition of the rooms and the care of the grounds show that some at least take an interest in them. The most noticeable exception to this is the school-house on Matson Hill. Vines and weeds obstructed the pathway to the door, which was opened with difficulty. The interior presented a most dilapidated condition, the plastering had fallen in large patches, the floor had large cracks and the windows were rattling in the August breeze. Surely there could be no more eloquent argument for consolidation and town management of schools. Matson Hill district may not be able to repair or build a school-house, but certainly the town of Glastonbury ought not to force any child to obtain an education in such a room. I do not see how it is possible for the occupants of that school-room to be *safe* during an ordinary winter day. The out-house is not worthy of mention.

The other duties of the health officer have not been arduous. Few orders have been given ; none have been appealed from or objected to. More complaints have come to me of dead animals left unburied than of any other one thing.



GOSHEN—DR. J. HOWARD NORTH, *Health Officer*.

There has been no epidemic.

There have been some cases of measles which were mostly in the outer portions of the town, the disease in every case originating in visitors to or from neighboring towns, and no fatal or complicated cases.

One case of thermal fever, the effect of the prolonged heated term.

A few cases of whooping cough at present, but none in the very young or that are very severe or complicated.

Methods of garbage and sewage disposal are such as would naturally obtain in an intelligent agricultural community, that is, it all finds its way back into the soil by way of the compost heaps and manure pile as fertilizing material, which manner of disposal is efficient and healthful, as we have no densely populated sections in our town to render it in any case a nuisance.

The sanitary condition of our school-houses and other public buildings is good, as none are ever crowded in use, neither has there been any outbreak of disease to render it necessary to suspend any school or disinfect the buildings other than the usual necessary cleaning and repairs.

Aside from some cases of enteric diseases the general public health is fully up to the average, especially when we consider the long heated term, and the people as a rule cheerfully accept and act upon any suggestions for the prevention of disease, as well as the proper care of the sick, and we believe our town to be among the most healthful ones in the state.

GRANBY—DR. ALFRED WEED, *Health Officer*.

The citizens of the town of Granby have always taken a commendable interest in the efforts of the health officer. His work has enlisted the hearty co-operation of all those interested in the welfare of our people. All efforts to protect and improve the public health, and investigations entered into by those in authority to abate nuisances, of whatever nature, are thoroughly appreciated, and that appreciation is substantiated by the willingness of those interested to render any assistance possible in maintaining and favorably considering any suggestion made to them concerning such nuisances, and in any devised plan for the improvement of those conditions which might, under favorable circumstances, be a source of danger if allowed to continue.

Eternal vigilance is the source of happiness and contentment, of inspirations to the heart of mankind to render strict obedience to all laws appertaining to their physical well-being.

In three instances has my attention been brought to the fact that dead animals were left on the surface of the ground during the early part of the summer, or were only partially buried. In each of these cases a mere suggestion of the evil and danger arising from such source seemed to be entirely sufficient to remind the owners thereof that nuisances of that character could not be allowed to exist ; therefore, the remedy was applied immediately, giving conclusive evidence, it seemed to me, that these cases were due more to negligence than to any desire to antagonize, or from any spirit of disobedience of the laws which govern the community.

I have made a thorough inspection of our school-houses, and the buildings thereto, and found them in a very good condition, hygienically speaking ; that is, as far as being located in the proximity to any source of contamination is considered, or in so far as there being any filth accumulations in or about the buildings ; but as to their being properly ventilated, so as to conduce to the best comfort of our little ones, considerable fault can be found ; and the manifestations of impatience on the part of the teachers and parents is, or seems to be, perfectly justifiable when one considers that the only way, under the present existing conditions, for the teacher to freshen the atmosphere of the school-room is to open the doors and windows, and this can only be done with safety while the children are at recess or absent at noon.

In accord, and with the wish of the State Board of Health, I have fumigated and disinfected the school-houses and surroundings.

I find that all the school children are not vaccinated, and while in a few cases the neglect to have it done is due to some feeling of antagonism on the part of the parent, or a natural reluctance about the operation, in other instances indifference may be the cause.

While it is not incumbent on the part of the parents by law to have their children vaccinated, yet it is of so much consequence to the welfare of the community, that it should be considered a pleasant duty to insist on such an operation being done on every child.

One of the greatest blessings vouchsafed to man is that we

have at our command means which, while it is not absolutely infallible as a protection, it has been to the world a boon, the appreciation of which is almost beyond power to express.

There have been four cases of measles reported to me during the year, and in each case the contagion was brought here from out of town. Great care was taken and quarantine regulations were applied, and the disease was checked before it had attacked but three in one family, and two in two of the families, and one in each of the others.

Have had two cases of typhoid fever reported, and three in my own practice. Those reported were of unknown origin. In the cases occurring in my own practice one, I believe, originated from the drinking water, there having been a small quantity of the dejections from a patient similarly affected several years before placed carelessly near the well used by the family with which my patient lived, and from which was taken the water drank by this patient.

In the other two cases the disease was very mild, as was, indeed, the fact with all of them, and they originated, I think, from bad sewerage arrangements.

Garbage is disposed of by fire. In the spring and fall huge bonfires are built in the lots where dry filth has accumulated during the summer, and the results of such disposal must be satisfactory, so far as danger is concerned.

Sewage matter is disposed of by being buried somewhere on the farm, far removed from any dwelling.

The sanitary condition of our public buildings are excellent and have always been considered so.

The water supply of our town is as near perfect as it is possible to make it as far as its conveyance to the dwellings and its quality is concerned. Occasionally, in the winter and during the very warm summer, it will slightly annoy the people by its being shut off from its source by the ice or being low at the reservoir in summer.

The water comes from a large brook about a mile from the village, from whence it is conveyed to the residential portion of the village of Salmon Brook by means of iron pipes. This water is clear, wholesome and pure, and as far as I can ascertain there has never been a case of sickness that could in any way be attributable to its use.

The inhabitants of the villages of North and West Granby are

supplied with water from wells and springs, usually located on the land of the family using it, and the care taken to keep such wells and springs in good condition is sufficient that no apprehensions on the part of the owner thereof is ever felt.

GREENWICH—DR. LEANDER P. JONES, *Health Officer*.

There have been reported to him by physicians : measles, 47 cases; scarlet fever, 29; diphtheria, 8; typhoid fever, 4. Whooping cough is not reported. The cases of scarlet fever were most of them very light. In some instances physicians were not called until the desquamative stage had been reached, and then every possible precaution was employed to prevent its further spread. There was one death from measles and one from diphtheria. A large number of deaths occurred among young children from bowel troubles, and that, with a number of accidental deaths, swelled our death-rate. It must be rembered that our regular population is increased by 3000 or more through the summer months. Aside from these considerations the rate would be low.

Within the borough the garbage is removed and buried, and when properly done is very satisfactory.

The sewage disposal within the borough is by sewers emptying into the Sound. The town needs more and better sewers.

The school-houses in the 19 districts have been carefully inspected by the health officer, and with the exception of three are in fair condition—some in excellent condition. Among the public buildings the hotels are sanitary. The building occupied by the officers of the town, known as the Town Building, might justly be criticized.

The water supply for the borough and vicinity is from the lakes of the Greenwich Water Co. It is properly filtered and is pure and wholesome. Many families outside the borough depend upon wells.

GRISWOLD AND BOROUGH OF JEWETT CITY—DR. GEO. H. JENNINGS, *Health Officer*.

*Measles*.—There were sixty-five cases of measles reported during the year. There were in all probability quite a number of cases not reported because no physician was in attendance.

*Diphtheria*.—There were ten cases reported. Of these cases five occurred in one family and three in another, all developed



before a physician was called. In every instance isolation of the cases and disinfection of the rooms occupied, after the termination of the cases. There was no spreading from the cases first seen in any instance.

*Whooping Cough.*—There were five cases reported. There were without doubt other cases that received home treatment and so were not reported.

*Typhoid Fever.*—There were fifteen cases reported. The cases were scattered and the origin could not be traced, and the cause was found to be sewage accumulation in the cellars. The accumulation of the filth from leaky or broken drain pipes must have been collecting for nearly a year, yet no complaint was received, and the condition was not known until a search for the cause of the fever revealed the foul cellars.

*Rothern.*—During June there were quite a number of cases. Many were cared for without calling in a physician, so that the number could not be ascertained.

*Malaria* was prevalent during September and October. There have been fewer cases during the summer of 1896 than during the previous summer, the freedom from malaria being undoubtedly due to the frequent rains that have maintained the ponds to nearly their natural size and so preventing the exposure of the shallow bottom, as has been usual in past seasons.

No steps have yet been taken to sewer Jewett City, although the need for a thorough system of drainage is constantly increasing.

The water supply from the new reservoir that was built for Jewett City has been abundant and of better quality than could have been expected. During July and August the water had a strong odor, when drawn from faucets, and its use for consumption was abandoned. Up to July it had been generally used. Water taken from the reservoir during the summer was apparently equal to that in any of the natural ponds.

During the summer vacation all school-houses were visited and thoroughly disinfected. The general sanitary conditions were found to be good. There were seven cases of public nuisance reported; all were promptly abated upon request of the health officer. Two requests were made where there were case of infectious disease to repair drains. Both requests were complied with.



GROTON—DR. JOHN GRAY, *Health Officer*.

During the year the following contagious and non-contagious diseases have appeared in town, namely : in the spring and summer months from forty to fifty cases of measles, primarily contracted in the city of New London. Every reasonable effort was made to stay the progress of the ailment, but the daily intercourse of the people of that city with those of Groton Bank, where the disease mostly prevailed, rendered all preventive measures futile.

Twelve cases of diphtheria were reported in town ; four at Noank in two families, two cases in each, of a mild type ; two at Mystic in two families, one case in each, and six at Poquonoc, occurring simultaneously in one family, all of a malignant type. The origin of the disease at Mystic and Noank was traceable to neglected sink-drains, cesspools and other unsanitary conditions, and at Poquonoc to a large accumulation of fish-cleanings in a state of decomposition. Two cases of mild scarlet fever have been reported, both occurring in Mystic, in two families ; no satisfactory cause was ascertained for its development. All of the families sick with diphtheria and scarlet fever were quarantined, patients isolated, and together with everything on or about the premises that would be likely to produce, retain, or transmit the disease was kept as clean as possible and thoroughly disinfected. All of the patients made rapid recovery under approved customary treatment, without the doubtful utility of anti-toxine in diphtheria. No secondary cases occurred from either disease. During the spring and summer months, from long existing local causes, namely, low streams and ponds of water and newly cleared-up woodland, the people in the western part of the town have suffered quite severely from the annual return of malaria, and I may add that the ailment has been quite universal all over the town.

I have responded to a score or more of complaints to abate various nuisances of unsanitary character and corrected them all without any unpleasant controversy. In accordance with resolutions from the State Board, I visited and inspected in August every school-house, railroad station and other public buildings and places in town, and ordered to be carried out the requirements of the resolutions, and whatever in my judgment was proper to be done for the public health. On inspection of the school-houses and water-closets connected therewith I found them mostly uncleaned and all the filthy accumulations remaining as when the

school term closed. In my opinion this is wrong and unsanitary, and what is done to renovate and disinfect a few days before schools commence should be done immediately after they have closed, and the houses interiorly kept aired from time to time, and I have so recommended.

GUILFORD—DR. G. PERRY REYNOLDS, *Health Officer*.

Whereas I am required by law to make an annual report of my doings for the past year to the State Board of Health, the county health officer and also to the town, of my official work, I respectfully submit the following report, with such information on each subject as suggested by the circular from the State Board of Health, of the following diseases.

*Measles*.—A mild epidemic of measles prevailed throughout the town the past winter and spring. The origin was from New Haven. A person had been to the city, and sat in a seat in a car with a man who had an eruptive disease, spreading from that particular case. The means adopted to prevent its spread was by quarantining as far as circumstances allowed.

*Typhoid Fever*.—Only one case, and that of mild type, of a young girl 12 years of age. The origin of same unknown.

*Garbage Disposal*.—No change from last year.

*School Houses, etc.*—Sanitary condition of all, very good.

*Public Buildings*.—Sanitary condition good.

*Water Supply*.—From wells and cisterns, generally.

A petition to improve the sanitary condition of the "Mill Pond" in the borough was circulated and received a long list of names of influential citizens, who regard the decomposed vegetable matter therein (as the water is very low) to be the cause of so many cases of intermittent and remittent fevers, occurring in the vicinity of the pond.

The stench arising from the vegetable decomposition calls for some immediate action to abate the nuisance.

HAMDEN—DR. G. H. JOSLIN, *Health Officer*.

Contagious diseases reported during the year ending Sept. 30, 1896.

*Measles*.—There have been twenty-five cases reported, and about two hundred not reported, with one death. The first cases were properly isolated, but when the disease became so general,

it was practically impossible to carry out quarantine rules. I experienced great difficulty in convincing people of the importance of preventive measures. Measles frequently leads to serious consequences, and even death, therefore it is quite necessary to prevent the spread of this disease. I believe it is possible to check this disease, if physicians and families will report the first cases.

*Scarlet Fever.*—Fourteen cases have been reported, with two deaths. It is very important to prevent the attendance at school of any scholar who has a sore throat or an eruption, let it be ever so light. I have notified all the teachers of this rule, and they have not all observed the rule strictly. A mild case of scarlet fever is capable of producing a most malignant case of scarlet fever and death, as the following history will prove. John ———, age sixteen years, attending a private school, came home on Tuesday feeling ill. The symptoms were so slight, the parents did not think it necessary to send for a physician. He died suddenly the following Thursday or Friday. I was called as coroner's medical examiner and found a very mild eruption about the chest, and the mother stated that the deceased had had a slight sore throat. Within fourteen days, three other children living in the same family were taken very violently ill, and all had scarlet fever. Most cases visited by myself were of a mild type. The origin of primary cases in two instances was traced to an infected center in New Haven, and in one case to a family residing in Hamden, attended by a New Haven physician, who failed to report the case, because he feared his family would be quarantined. All other cases were infected from primary cases living in the same family. The usual methods were adopted to restrict the spread of said disease.

*Diphtheria and Membraneous Croup.*—There were fifteen cases and four deaths. During the months of October and November '95, diphtheria appeared in the village of Centerville. The disease appeared first in the family of one Dagan. As the children of said family attended school in No. 5, the disease spread rapidly among the children in that district and it was necessary to close the school. The primary source of infection was found in the family of said Dagan.

*Whooping Cough.*—Several cases of whooping cough came to my notice during the year, and the rules mentioned when speaking of measles holds good for this disease also.

*Typhoid Fever.*—Two cases have been reported and two deaths. The primary cause of infection in one case was traced to drinking water in New Haven, and in the second case to infected garbage carted from New Haven to Highwood.

*Garbage Disposal and Results.*—For many years Hamden has been the dumping ground for New Haven and Hamden garbage collectors. This wholesale garbage nuisance has been stopped in a large measure, and I am in hopes of abolishing it entirely before long. The keeping of large numbers of hogs in the thickly settled portions of the town has been almost entirely done away with. Most garbage that is not fed to hogs is allowed to accumulate in the back yards of many residences that I have visited during the year, there to decompose and breed disease germs. Early in the spring I made an inspection of nearly all the residences in the most thickly settled parts of the town, and had such heaps of filth removed, or disinfected by means of a solution of copperas, one pound to a gallon of hot water.

*Sewage Disposal.*—An important suggestion of modern science with regard to the nature of the operations by which filth attacking the human body is able to disorder or destroy it, is that the chief agencies in filth are other than those stinking gases which force themselves on popular attention. An unventilated old cess-pool or long blocked sewer may no doubt prove immediately fatal by reason of some large quantity of sulphide of ammonia. In a smaller quantity it is capable of producing headache and general discomfort. The other and far wider possibilities of mischief which we recognize in filth are such as apparently must be attributed to living organisms or germs. It is of the utmost practical importance to recognize in regard to filth, that agents which destroy its stink may yet leave all its main powers of disease-production undiminished. I have inspected several cesspools during the year, and most of them were condemned, either because they were too near sources of water-supply, or had leaky connections, or were unventilated.

The sanitary condition of our school-houses might be improved by adopting some method of ventilation other than open windows and doors. All the school buildings in town were thoroughly fumigated during the summer vacation.

The sanitary condition of other public buildings was found to be very fair, including the lock-up.

*The Water Supply.*—I have examined a great number of wells



during the year, and found a goodly number dangerously near old cesspools or privy vaults. In two instances I found wells receiving sewage directly from broken or imperfect tile drains.

No public works of sanitary influence have been undertaken during the year, such as sewers, drainage, public water-supply, etc. In my judgment well directed efforts on the part of the town and the New Haven Water Co., such as drainage of swamps, etc., would render our town and climate more salubrious. I have called the Water Company's attention to one or two possible sources of contamination of the waters of Lake Whitney, but nothing has been done to remedy the dangerous pollution.

HAMPTON—MR. HORACE JACKSON, *Health Officer*.

In January and February there were twelve cases of measles reported, one death resulting from the disease, now quite virulent in type.

Primary case. A young man came from New York to visit his parents, where there was a large family of children. In a short time he was taken sick with measles. The children attended school. In due time, the scholars and teacher were taken sick with measles; the teacher from another school was taken sick with the disease. Both schools were closed for two weeks.

The families where the disease existed were all isolated as much as possible; no further infection.

One case of measles reported in July and one in August; both children had been out of town for a few days; no secondary case from either.

Whooping cough and chicken-pox were quite prevalent during the winter months.

The people of this town generally have an intelligent appreciation of proper health regulations and seem ready at all times to coöperate with the health officer in carrying them out.

HARTLAND—MR. C. L. COWDRY, *Health Officer*.

For the year ending August 31, 1896, there has been one case of measles, but no other contagious diseases in town the past year, and but little sickness. Our schools are small, only numbering in attendance about twelve scholars in the largest district. The school-houses, in most cases, are well cared for.



HARWINTON—DR. C. L. BLAKE, *Health Officer*.

There has been an epidemic of measles in town, with one or two deaths.

Two cases of typhoid fever.

The sanitary condition of school-houses and public buildings is good.

Water is supplied from wells and springs.

HEBRON—DR. CYRUS H. PENDLETON, *Health Officer*.

There have occurred during the year ending August 31, 1896, twenty-five cases of measles, all terminating in recovery. In eight cases the subjects were adults.

As occurring in children, the cases averaged neither especially severe, nor especially mild. In adults, while not virulent, the cases were nearly all of a rather severe grade.

The first case was in a young child, who contracted the disease while away from home. The secondary cases resulting from this were thirteen, four in the same family, and nine in the family of a neighbor. The other cases, with the exception of one, in a school-teacher contracting the disease, while teaching school in another town, resulted from a person, supposed to be protected by having had a previous attack, contracting the disease while away from home on business. The cases secondary to this were the result of the disease not being recognized, nor suspected, till others had been exposed. To prevent the spread of the disease, all suspected cases were, as far as practicable, isolated, except to protected persons. There has been one case only of diphtheria, occurring in November, 1895, reported to me, terminating fatally during December, from the secondary effects of the disease, while the patient was apparently convalescing. The origin of the case could not be ascertained.

There have been two mild cases only of whooping cough, in non-resident children. In one case the disease was developed before the child came here, and in the other, soon after.

The year has been a year of average good health.

In common with other country towns, garbage is fed to pigs so far as suitable for that purpose, otherwise, mostly worked into material for fertilizing. As to sewage, privy vaults are usually cleaned out in the spring, and the contents used for fertilizing purposes.

Sink-drains are cleaned out a good deal according to the habits or convenience of the owners of the premises. There are, of course, no sewers, and no uniform method of sewage disposal.

The school-houses have been ordered thoroughly cleansed out, and are believed to be in good sanitary condition; as also the other public buildings.

The water supply is by wells, and aqueducts bring water from some spring or well in the near vicinity, but mostly wells.

HUNTINGTON—DR. W. S. RANDALL, *Health Officer*.

One hundred and seventy cases of contagious diseases have been reported during the year ending August 31st, 1896, as against thirty-six for the preceding year. These are sub-divided as follows:—

*Measles*.—152 cases.

*Scarlet Fever*.—One case.

*Diphtheria*.—Two cases.

*Whooping Cough*.—Two cases.

*Typhoid Fever*.—Ten cases.

*German Measles*.—Three cases.

It will be noticed, with no little interest, that this comparatively large number of cases is made up of measles (which was epidemic during the spring months), to the extent of about 89 per cent. This is the largest epidemic which has ever visited us, and, for the most part, one of the mildest of its kind.

It has, however, included in its sweep many serious cases, especially as regards eye and bronchial complications. This epidemic has been widespread throughout the country and has proved very fatal in its results, in many cases, even in certain sections of our own state.

This should be a warning to our citizens not to look upon measles as being a disease which requires no care and one devoid of all danger.

No deaths have occurred outside the borough of Shelton during the past year from the above list of zymotic diseases. The number of deaths for the preceding year was two. Thus, it will be readily observed, that with nearly five times the number of cases reported there have been nearly one hundred per cent. of recov-

eries, which is a matter concerning which our citizens should feel justly proud.

We have been particularly fortunate as regards scarlet fever, only one case having been reported, while in towns in close proximity, numerous cases and many fatal ones have occurred.

Only two diphtheria cases have been recorded, and these of rather mild type. Careful quarantine measures and disinfection prevented further contagion.

Of whooping cough, two cases were reported.

Typhoid fever has occurred as follows :—

One case in September, 1895 ; one in April, 1896 ; two cases in each of the following months :—March, June, July and August. The cases have nearly all of them been mild and good recovery taken place.

About fifteen visitations have been made during the year for the purpose of looking after and correcting, if necessary, unsanitary conditions and nuisances. It is with pleasure that the health officer can report that, in the majority of these cases, our people have been willing to coöperate with him in carrying out the rules and in doing away with such features as are not conducive to the best sanitary conditions. The attention of the health officer has, on different occasions, been called to that portion of Maltby street lying south of the borough line. This street is low and marshy and, from a sanitary point of view, requires good drainage and proper grading.

Of the twelve district schools in the town, ten have been in active operation during the year. These ten schools were visited by the health officer, between September 5th, 1895, and March 26th, 1896, with these objects in view, viz : 1st, to look after the sanitary conditions and ventilation of the several buildings ; 2d, to ascertain the character of the water supply ; and 3d, to instruct the teachers regarding the necessity of reporting at once to the health officer any cases of contagious disease or suspicious cases, either in the school or in the families of the pupils. In seven of these schools defective ventilation was found to exist, together with an unsanitary condition of the closets. In one district, known as Trapfall, there appears to be a lack of good water for the use of the school.

A system of ventilation was suggested to the committee and has already been introduced in four of the buildings, and will be extended to the remainder in a short time.

Reports from the teachers in the various districts have been made, in accordance with the rules, in about fifteen suspicious cases, and visits made in most of them to ascertain the nature of the trouble. In those requiring it, the children were detained at home until convalescence was thoroughly established.

The method of garbage disposal in the town still remains in a very crude state. No well organized plan has yet been adopted for the disposal of this unwholesome debris. It is usually deposited in the most remote corner of the yard, or thrown across the street upon some vacant lot, or into a neighboring brook.

The matter of sewage disposal is likewise in a crude state. There appears to be no practical way of constructing a sewer system outside the borough limits at the present time, consequently three ways of disposal are used, as follows: By cess-pools, surface drainage and, where convenient, by connecting with a neighboring brook. Of course, none of these plans are satisfactory, but seem to be the only solution of the question as a temporary expedient.

The water supply, with few exceptions, is well up to the standard. The principal exception refers to its turbidity, which may be caused by the presence in the lower reservoir of the so-called German carp, or lack of proper filtration, or both. In any event, a thorough investigation would undoubtedly reveal the trouble. The reservoirs are closely watched, and anything partaking of the nature of an unsanitary condition along the water-shed is remedied as soon as possible. During the past year the lower reservoir has received especial attention in the way of fencing in and clearing away bushes and debris along its banks.

It will, in the future, be a wise measure to take some precautions concerning the milk supply, in order to prevent the spread of disease through this channel.

KENT—DR. A. W. GRISWOLD, *Health Officer*.

There were six cases of measles reported; three were contracted out of town, and three from the above primary cases. There were no other cases of contagious diseases reported to me.

There is a private sewer running through Main street and most of the houses are connected thereto; otherwise it is privy vaults that are used.



The school-houses and public buildings are in a fair sanitary condition.

Wells, springs and a reservoir are the means of water supply.

There have been no public works of a sanitary character undertaken during the year.

KILLINGLY—DR. A. E. DARLING, *Health Officer*.

The past year has required more than the usual amount of service from the health officer. Some nuisances were brought to notice, but were disposed of agreeably to all parties concerned.

Measles have prevailed generally throughout the town. Most of the cases were mild. This disease has been so extensive that little attempt at quarantine was made further than to restrict those families having it from sending their children to school. Many cases were not reported because some families did not employ any physician, so that an attempt at strict quarantine was practically useless.

Scarlet fever has prevailed in certain localities. The cases have been of a mild character. Fifteen cases have occurred outside of the borough of Danielson. In no instance could the origin of the primary case be ascertained.

The quarantine rules consist of putting a placard upon the house and preventing all communication with the family, and also the family from having intercourse with others as far as possible. No children are allowed to attend school from such families, and those working in factories and shops are required to board away from home, or they are not allowed to work. We maintain these restrictions until the period of desquamation is finished. This varies with each patient according to the conditions of the case. All patients are personally examined before they are allowed their liberty. When a family is free from the disease they are required to fumigate and disinfect their rooms, with all their carpets, bedding, and everything liable to retain the contagion.

The town has been practically free from diphtheria during the past year. Only three cases are recorded.

A few cases of whooping cough, the remnant of the epidemic last year, were noted. Only one case of typhoid fever has been reported.



KILLINGWORTH—DR. E. P. NICHOLS, *Health Officer*.

The record of the year closing August 31st, 1896, compares favorably with those of the last decade. Cases of severe illness have been rare.

Four cases of measles occurred in one family and three in another family. All were of a mild type.

No contagious nor infectious diseases except measles.

Garbage is easily disposed of without detriment to the public health.

The school-houses are small, well ventilated, never crowded, and easily kept in a cleanly condition.

The water supply is abundant from wells, and there is nothing to pollute the ponds from which the ice crop is harvested.

LEBANON—DR. E. L. DANIELSON, *Health Officer*.

There have been three cases of measles reported: two in June and one in August. The first case was brought here from Manchester, Conn., where the disease was quite prevalent, and developed the disease the day after it arrived here. The second case received the contagion from a baby carriage that was used by the first case. The third case was also brought here and developed the disease soon after its arrival here. They were isolated as far as necessary, houses properly disinfected, and no other cases have occurred.

There were nine cases of whooping cough reported in May, and there have been several other cases proceeding from these that were not reported. The disease was mild, few of them being sick enough to need a doctor. It was impossible to isolate them and they were allowed to play with other children.

The sanitary condition of school-houses and other public buildings is fairly good, but the people are rather careless about the condition of the out-houses, although they are in much better condition than formerly.

Garbage is usually burned, although a great part of the refuse materials from the houses is eaten by hogs and fowls.

Sewage is collected in cesspools or carried away in drains, both closed and open, to a proper distance.

No public work of sanitary influence has been undertaken.

During August I inspected the school-houses and ordered them fumigated, as requested by the State Board of Health.

LEDYARD—DR. EDWIN W. CASE, *Health Officer*.

The number of contagious diseases has been very limited. I have personally attended one case of *Scarlatina Anginosa* and am now attending one case of typhoid. No other contagious diseases have been reported.

There has been more malaria than has ever before been known in the history of the town.

There are fourteen school-houses in town : in one no school will be held ; two were in such good condition last year that an inspection seemed unnecessary. I have made sanitary inspections of the remaining eleven ; in two of them the sanitary conditions were not improved, the directions last year not having been carried out ; the remaining ones have been improved or unsanitary conditions are now being carried out.

Complaint has been made in one case of a dwelling-house not being in a sanitary condition. Inspection was made and, being verified, was promptly corrected.

LISBON—DR. HENRY LYON, *Health Officer*.

October 1st, 1895, eight cases of measles were reported, of which one proved fatal. The disease originated in Jewett City (town of Griswold), and was confined to one family in this town.

The sanitary condition of the school-houses is first-class ; of other public buildings, good.

The water supply is obtained from wells and springs adjacent to the school-houses and other buildings.

There has been no public works of a sanitary nature undertaken by the town during the year.

TOWN AND BOROUGH OF LITCHFIELD—DR. JOHN L. BUEL,  
*Health Officer*.

I have the honor to report to you as follows concerning the sanitary condition of the town and borough of Litchfield from October, 1895, to June, 1896 :

*Contagious Diseases.*

*Measles*—An epidemic of measles has prevailed through all this time, varying in intensity in different localities. The most severe type of the disease appeared in Bantam during the months

of February and March. Thirty or more cases were reported by physicians or families, and many others occurred, but were of such a mild type that no medical attendant was called, and no notice sent to the health officer. The source of contagion could not be ascertained, for the disease appeared at the same time in various localities, and no common starting-point could be found. Although very general, the epidemic was of a mild character, and only a few cases terminated fatally.

*Scarlet Fever*—But one case of this disease was reported ; was probably contracted through parties coming to the house from Torrington, where at that time cases of scarlatina existed. No other types of contagious disease were reported to the health officer.

*Typhoid Fever*—A single case of this disease was reported. It was of a severe type and proved fatal. It developed while the patient was at work clearing out the soil from a swamp for the purpose of making an ice pond. During the two weeks previous to the onset of the disease, he had been in neighboring places, where typhoid fever existed, but denied visiting at houses occupied by typhoid cases, or using any water for drinking purposes in those localities. No other cases occurred in this man's family, or in other parts of the town.

The above report covers all the cases of contagious and infectious diseases that the health officer knew of for the period mentioned.

Most of the school-houses in the town were visited and the arrangements for heating, ventilation, etc., found satisfactory.

The ponds, streams, etc., from which the ice is cut to supply the town were found clean and free from contamination from sewage or other injurious matter.

The railroad stations of the town were found to be as the law directs regarding sanitary arrangements, except in the case of small flag stations.

The general sanitary condition of the town has been excellent, and shown the beneficial effect of the water and sewage systems which have been recently introduced.

Very few complaints have been made to the health officer for the correction or removal of nuisances, and when made, no difficulty was experienced in rectifying the conditions.

TOWN AND BOROUGH OF LITCHFIELD—DR. CHARLES O. BELDEN,  
*Health Officer.*

I have the honor to report to you as follows concerning the sanitary condition of the town and borough of Litchfield from June, 1896, to October, 1896.

*Measles*—The epidemic of measles which prevailed during most of the winter of 1895 and 1896, and which was confined largely to the village of Bantam, did not make its appearance in the borough of Litchfield nor within a mile of the borough, until about the first of April.

There have been reported to me since that date, in addition to the cases reported to Dr. Buel, four cases of measles in April, thirty in May, and twenty-nine cases in June. Since the first of July four cases of measles only have been reported and the epidemic had practically disappeared before the middle of July.

There have been no fatal cases of measles in the town or borough of Litchfield since the first of June, and the last three months of the epidemic the cases have been of a mild form.

*Scarlet Fever*—No cases of scarlet fever have occurred since the first of June.

*Diphtheria*—One case of diphtheria occurred in the village of Milton and was reported to me on the 21st of July. Case was probably contracted in the city of Waterbury, where the girl had been residing. The house was at once quarantined and all necessary precautions taken. No other cases occurred.

*Whooping Cough*—A few sporadic cases have occurred during the summer, only thirteen cases having been reported. Not any cases in September. Only one case, that of an infant, terminated fatally.

*Typhoid Fever*—But one case of typhoid fever has occurred since the first of June. The patient had been employed as a driver for a travelling circus and left their employ on the 19th of June to obtain work in the borough. He was taken ill on the following day, the 20th, and was seen on the 21st, when his case was diagnosed as one of typhoid fever in the first week. There being no place in the borough where he could be properly cared for, and his general condition being good, he was sent in an ambulance the morning of the 23d to the Waterbury hospital, where the case terminated fatally some three weeks later. It was impossible, as he had been travelling from town to town, to determine where the disease was contracted.



The above report covers all the cases of contagious and infectious diseases reported to health officer during period mentioned.

The general sanitary condition of the town has been excellent during the summer.

LYME—DR. J. G. ELY, *Health Officer*.

Cases of contagious diseases have occurred, but in few instances have been followed by others.

The past summer has witnessed the almost complete occupation of this town by our old time enemy, "malaria."

Our public buildings have been found to be in good sanitary condition, and the school-houses have been disinfected according to suggestions from the State Health Board.

No complaints have been received during the year, and, although the subject of the "sink drain" nuisance has been quite thoroughly investigated, no very flagrant cases have been discovered.

Outside of the material conditions which now prevail, I think the town is to be congratulated on its general good health.

MADISON—DR. ALVENO D. AYERS, *Health Officer*.

Beginning with Oct. 1st, 1895, and up to date, I hereby report six cases of measles that have been reported to me. There were no secondary cases, only in the house where first case occurred, and each case reported contracted the disease out of town. Rumors of cases in East River, that no doubt are authentic, have come to my knowledge, but if attended by any physician, no report was made to me.

In all cases of quarantining houses, the people have obeyed the law willingly so far.

Garbage is generally utilized as a fertilizer. Occasionally it is carted and dumped beside a back street or highway, and when known, a notice prohibiting such dumping or leaving of garbage has been posted, signed by selectmen and health officer. The nuisance has not been repeated.

Sewage mostly by cesspools.

The sanitary condition of school-houses fair. The same may be said about the churches. However, there is a custom prevailing at the Congregational church, South society, which I believe is unwise. I refer to the dumping or leaving near the church flowers, evergreens, etc., (used in decorating,) to decompose. At



times considerable stench, offensive in nature, is detected, and it has been in my mind a question, aside from the unsanitary condition produced by the decomposing of such rubbish, if there might not be danger of spontaneous combustion, thereby endangering buildings. I believe the proper way is to cart away all such stuff or burn it as soon as used.

Water supply is mostly from wells.

In building the new R. R. station, a decided improvement has been made regarding the sanitary condition of the closets therein; the best of plumbing and sanitary bowls of modern make were put in. At first it was said the sewer-pipes were to go into a low spot of ground which drains into the water supply of Tuxis Lake. I watched the work daily until I learned the pipes were to lead into a cesspool; and in my opinion there is no danger of drainage therefrom into any water supply, and the pipes were provided with proper traps.

In my opinion the time is near at hand when some action *must* be taken regarding out-houses south of the new road. From West wharf going east they are not only unsightly, but they, with the places of low ground that retains stagnant water (swamp holes), I believe are a source of danger not only to the health of summer occupants of the cottages, but to the general public. It seems to me some plan whereby the stagnant water could be carried off, or prevented from accumulating there, should be devised by either voluntary action of those who own the property, or by some other method; and if it is not possible to get rid of the unsightly out-houses, they could be made comparatively healthy by use of dry earth, if the pools of water are done away with.

MANCHESTER—DR. M. S. BRADLEY, *Health Officer*.

With one exception, contagious diseases have not been prevalent in the town of Manchester during the past year. Whooping cough, which was general during the past year, with the exception of a few isolated cases, died out completely during the early winter months.

The number of cases of scarlet fever have been only six, and in no case has there been any sign of direct transmission from some other case. Extreme care has been taken in the isolation of cases and of careful disinfection after the close of the illness.

Only one case of membranous croup has appeared and that was rapidly fatal.

Typhoid fever died out in December to make its appearance again in August. There has been no epidemic nor has there been so many cases as the general public supposed, only eight cases having been reported as genuine typhoid.

We have been remarkably free from diphtheria, considering how it has flourished among our neighboring towns, the worst case being in a family who came from New Britain during the epidemic, and where there were four cases at the same time in one family. Eight cases besides these in different localities have been observed.

It has been a remarkable family, if there be children, that has not had at least one case of measles during the last year. Commencing the first week of last February in the South School at South Manchester, it crept from house to house, from family to family, with great rapidity. One of the teachers in an outlying district attempted to open her school one morning, but no children appeared. They were all detained at home by measles. It was not until the middle of July that the disease abated. Many cases were of such a mild nature that no physician was summoned, but from careful inquiry it will be safe to say that we had at least eight hundred cases of measles during the past year, the epidemic winding up at the north end of the town.

One of the most conspicuous topics for discussion in the circular from the State Board of Health is: "What is the method of garbage disposal?" Mainly we should say at the back door, a constantly increasing hillock of the refuse of the kitchen, the breeding place of flies and disease. A large number of the more careful families burn theirs, while from a few it is collected by some "knight of the push cart," to satiate the ever-ready appetite of the pig. Let us hope that the day is not far distant when the town will run one or more carts for the collection of garbage.

A petition of nearly two hundred of the prominent people of the North end concerning the nuisance of Horckheimer Brothers at their wool pullery at the Ubion Mill was forwarded to the County Health Officer in June. On examination it was found that they were allowing certain fats, soaps, chemicals and organic matter of an offensive character to run into the Hockanum river. An order to stop the nuisance was served on them, but their mills shutting down in July, owing to the general financial depression, prevented any active measures at that time.

What is known as the "pest house," a comparatively new

building located on the town farm property, is the only public provision the town has for the care of contagious diseases. It is an extremely rare occurrence for the town to have the care of such diseases that circumstances prevent being cared for in their own abode. The rarity, however, does not render such cases less important when they do occur. It is next to impossible to obtain a skilled nurse to go to such a place. If for no other reason, its name, "pest house," alone condemns it. Its distance from medical attendance is another disadvantage. If some arrangement could be made whereby such cases could be admitted to the contagious ward of the Hartford hospital, it would be of great advantage to the patient.

The only school in town with perfected sanitary appliances is District No. 9, at the South end. The large school at the North end is, from its size, perhaps the worst. The lack of a sewerage system at the North end prevents the use of the more modern conveniences and renders the school a nuisance in the neighborhood at certain times of the year.

The water supply of the town is excelled by none in the state. Both the North and South ends of the town have good reservoirs located on high ground and fed by small brooks and springs. A system of sand filtration also aids the purity of the water.

Our system of sewage is deficient, there being no sewer in the North end of the town. In South Manchester the system is first-class, but not as complete as it should be, some streets that are well built up being without sewers.

#### MANSFIELD—DR. E. G. SUMNER, *Health Officer*.

The sanitary condition of this town has improved since the recent laws pertaining to health officers. Cesspools and sink drains are with more care kept away from wells and springs used for drinking water. People are more enlightened regarding the sanitary laws which govern these things, having had their attention often called to them by their physician and health officer.

We have had no alarming epidemic, although quite a number of contagious diseases, as will be seen below, measles and scarlet fever taking the lead. Ten cases of measles have been reported to me by the attending physicians, none fatal.

Eight cases of scarlet fever. All recovered.

Of diphtheria we have had but one mild case, recovery complete.

We have had two cases of typhoid fever, both occurring in the same family. The first case, in January, supposed to have been contracted in an adjoining town, and the patient came home sick. This patient recovered, and in March, a brother was taken sick at their home and died the last of July, seemingly from complications, some four months from the commencement of the fever.

In addition to the above, I have reported from Dr. F. E. Johnson, who was health officer from Sept. 1 to Jan. 1, 1896 (during my temporary absence from the state), four cases of typhoid fever, one case in October, and three in November.

Also he reported eight cases of whooping cough.

We have had none of the diseases classed as "contagious" by the State Board of Health.

Regarding the disposal of sewage or garbage, as in other country towns, each family is a law unto itself, disposing of it as best they can.

Scarlet fever at Storrs College, although alarming at first, was prevented from spreading by isolation of the patient and thoroughly fumigating the rooms and clothing, and with the most generous use of approved disinfectants. But one case occurred in the college building proper. Two in a family quite near.

The sanitary condition of the school-houses has been looked after, and all have been, or will be, fumigated with sulphur fumes as ordered by the State Board of Health.

The health officer has reported all cases of contagious diseases each month to the secretary of the State Board of Health, as required by the Board.

CITY OF MERIDEN—DR. E. A. WILSON, *Health Officer*.

*Measles*.—An epidemic of this disease prevailed during the spring and early summer. 189 cases were reported. There were probably 2,000 cases in town—thirteen deaths from measles and its sequels.

*Scarlet Fever*.—A number of cases occurred at the State School early in the year and stringent methods were adopted. Recently six cases occurred in one family. The disease has been of a light type. Forty-two cases—three deaths. Over-confidence on the part of some people was the cause of several cases, as they were considered to be measles. Often no physician is called until the contagion has spread.



*Typhoid Fever* has been very mild. A serious question has arisen whether the so-called typhoid fever was not a malarial fever of a low grade. Placards for this disease are no longer used, but the cases must be reported as formerly. Eight cases, one death.

*Diphtheria and Croup.*—A very fine distinction is drawn by some people outside the medical profession between diphtheria and membranous croup—their theory being that diphtheria is contagious and croup is not. Both diseases are included under the same head by all health departments throughout the country. The certainty of diagnosis by the microscope is well recognized, and many cities furnish free tubes for culture, and examine for the germ, by which the diagnosis is confirmed. Diphtheria, membranous croup, laryngitis or tonsilitis may all be diphtheria, and a bacteriological examination is the only known test to fully decide whether the disease is specific or non-specific. The life of diphtheritic germs is uncertain, but they have been found in the nose and throat of convalescent patients forty days after disappearance of the membrane from the throat, which shows the necessity of great care in raising the quarantine and releasing the patient. In some cases it has seemed advisable to remove the patients to the pest house\* on account of the impossibility of fully isolating the case. This is especially so in tenement houses where a strict quarantine cannot be enforced without a guard. The anti-toxin treatment has been so satisfactory that it seems advisable to suggest that the city furnish it in cases where the family is not able to purchase it. Twenty-five cases, eight deaths.

*Consumption.*—This disease is now regarded as contagious, and in many of the large cities precautions are taken to prevent its spread. The danger is from the dried expectoration, which soon turns to dust and is inhaled.

*Garbage Disposal.*—The utilization process, which gives a profit by the extraction of oils from garbage, seems now to be the best method for adoption. It requires the separation of ashes and garbage. Under our system dumping places must be used which are remote from residences, and each year the question is more serious. Various devices attached to stoves are in use for the cremation or carbonizing of garbage.

\* It is discreditable to Meriden that it maintains a "pest house" instead of a hospital.—C. A. L.



*Sewers.*—The extension of sewers removes many sources of complaint which come to this office, and greatly improves the sanitary condition. Connections are rather slowly made, and, in my opinion, should be made within a limited time after the sewer is accepted, and the abolition of privies and cesspools follow the connections. In several instances only the sinks in the house are connected, thus keeping the worst sewage in storage about the homes.

*Brooks.*—The brooks have all been cleaned during the year, but some will need special attention, especially the one from Cat swamp.

*Milk and Food.*—The importance of a thorough and systematic inspection of our food cannot be overestimated. The simple inspection of milk as it is on sale will be beneficial, but not so much as a visit to the milk farms and dairies. Their sanitary surroundings, the quality of food and water, the treatment of the stock, and the final handling of the milk before transportation, are of the utmost importance. Epidemics of various contagious diseases have been traced to milk, and often the freshly drawn milk was allowed to become contaminated with the germs of disease, and then sold. Meat and fruit are exposed for sale which are utterly unfit for food. I am opposed to exposing meat, poultry, fish, fruit, etc., outside the stores. Dust is sure to accumulate, and sometimes, worse than dust. The state inspection of cattle is a pronounced advance and will soon eradicate all diseased animals, and so reduce the danger of contagion. A recent publication says: "The care bestowed upon the examination of meat for the use of the Jewish community is an important factor in the longevity of the race which is at present attracting so much attention, and in its comparative immunity from scrofula and tuberculosis."

TOWN OF MERIDEN—DR. E. A. WILSON, *Health Officer*.

The following contagious diseases were reported :

*Measles.*—Twelve cases, two deaths.

*Scarlet Fever.*—Four cases.

*Diphtheria and Croup.*—Three cases, one death.

*Typhoid Fever.*—Eight cases.

Measles has been epidemic, but very few cases have been reported, as no physician is called. There have been several deaths caused by measles or its sequelæ. Teachers in the public schools

were notified that children sick with measles would not be permitted to return to school without a certificate from the attending physician or the health officer. The principal portion of the epidemic was in April, May and June.

There were no deaths from scarlet fever. In this disease a great deal of argument is required to convince people that the danger of contagion does not disappear with the eruption; the quarantine until desquamation is completed is irksome, and strenuously opposed; but as a result of the enforced quarantine, the disease is confined to the family where it was first found, and generally to the individual. Several cases have occurred in tenement houses in the city where one entrance is used in common by all the tenants; in such cases it is almost impossible to isolate the family, and I would suggest that the so-called pest house be made available for the reception of such cases.

Diphtheria and croup, three cases, one death. In the fatal case there were eight others in the family, who lived in two rooms. Isolation was enforced as thoroughly as possible, but could not be made complete. The rest of the family was inoculated with the immunizing anti-toxin, 600 units strength, on the third day. The delay in immunizing was caused by a holiday when it was impossible to obtain any serum. The scientific diagnosis of diphtheria by culture is so positive now that, in my opinion, a culture should be made in every case of suspicious sore throat, whether it be called laryngitis, tonsillitis or diphtheria.

Typhoid fever. In two of these cases the well-water was directly contaminated by sink discharges from the house. The water was ordered to be boiled, and a suggestion made to connect with city water service. The rest of the cases were of a mild type, and the origin could not be traced. Three of the cases used water from the same well. Analysis showed the water to be pure. In one case the water came from a driven well.

Methods of garbage disposal and results. Garbage and ashes are collected mixed and are used to fill in low ground. The rule is that a covering of earth must be applied at stated intervals. Each year the places for filling are harder to find, and as the city does not allow dumping inside its limits from May 15 to October 15, the refuse must be dumped in the town. There is a strong objection to separation on the ground that ashes neutralize and prevent rapid putrefaction.

Sewage disposal. The city sewer beds are located partly in our town and partly in Wallingford. I have had no complaints this year.

Public provision for the care of contagious cases. There is an 8-room building which has been used only for small-pox.

Ice supply. Late in the fall and early in the winter a careful and thorough examination of all the ice ponds was made. It is a great pleasure to state that the surroundings were first-class.

Rendering establishments. Considerable time and attention have been given by County Health Officer Hoadley and myself to careful investigation of these places. We have been shown the utmost courtesy and offered every opportunity to thoroughly examine all the workings by the proprietors, who also willingly accepted all our suggestions and orders, and endeavored to have everything made right.

Milk supply. Recent epidemics of typhoid fever, traceable directly to milk, emphasize the necessity for a thorough and systematic investigation of all dairy farms, their sanitary surroundings and water supply.

#### MIDDLEBURY—DR. GEO. B. BRISTOL, *Health Officer*.

There have been about thirty cases of measles in the town of Middlebury during the year ending August 31, 1896.

The spread of measles was largely due to neglect in reporting cases in season to prevent spread of contagion.

Only a few cases of whooping cough.

We have had one case of typhoid fever.

There have been two cases of intermittent fever, one light, one of the inflammatory type. The one of severe type was contracted in Cheshire, developed in Orange and recovered here on the higher grounds.

We have very little garbage to care for and sewage is mostly disposed of by under-drainage.

The sanitary condition of the school-houses is fair.

We have a public park which cannot be excelled.

The present year there has been a town hall erected, anticipating the future growth and demands of the town.

There is a large export of milk and great care is taken to have it No. 1, by cooling in springs, of which the town abounds.

CITY OF MIDDLETOWN—J. FRANCIS CALEF, M. D., *Health Officer*.

When I assumed the position of City Health Officer, October 1st, 1895, I knew that diphtheria and scarlet fever had been prevailing throughout the city for at least a month, but no cases had then been reported. A circular letter was at once sent to every physician practicing in the city, asking their coöperation, and setting forth my proposed methods of controlling the diseases then in the city, and of stamping out any new epidemic. From the first, the mass of the profession were with me, and to their prompt report of cases and hearty coöperation, depends in great measure the results I have to report.

Cases reported during the months of

	1895.			1896.										Total Cases.	Deaths.
	Oct.	Nov.	Dec.	Jan.	Feb.	Mch.	Apr.	May	June	July	Aug.	Sept.			
Measles.....	0	0	0	0	0	0	30	75	90	?	?	0	195	Unk.	
Scarlet Fever.....	5	3	9	4	11	0	0	0	0	0	0	0	32	1	
Diphtheria, True.....	4	9	3	4	3	1	0	0	0	0	0	1	25	4	
Diphtheria, False.....	1	0	3	0	3	4	0	0	0	0	0	4	15	0	
Whooping Cough.....	0	0	0	0	0	0	0	0	4	6	2	1	13	1	
Cerebro-Spinal Fever.....	0	0	0	0	0	0	0	0	0	0	0	1	1	1	
Typhoid Fever.....	0	1	0	0	1	1	0	0	0	0	1	1	5	1	
Small-pox.....	0	0	0	0	1	0	0	0	0	0	0	0	1	0	

It will be noticed, that the scarlet fever cases fell to four in January; were increased to eleven in February, by a fresh importation from the town outside the city; were reduced to zero by March 1st, where it has remained to present date.

The epidemic of diphtheria also began before I took office. I made cultures from the throat of every reported case. Those showing the K. L. bacillus were carefully quarantined, the parts of the house not set apart for the sick at once disinfected, and so soon as the sick had recovered, or died, the whole house was disinfected, usually under the personal supervision of the health officer. In this way no infection could be found to have spread out of the house in any case, and in most cases, none save those

NOTE.—The town was without a health officer until February 15th, 1896.



in immediate attendance contracted the disease. The case in which the K. L. bacillus were not found, were left entirely alone by the health department, thus reducing by nearly one-third the labor of this department, and saving fifteen families from the inconvenience of quarantine. Careful inquiry showed, as was expected, that no single case of diphtheria was contracted from any of these cases. On the other hand, six of the cases of true diphtheria were unquestionably proven to have been contracted from supposed cases of *non-diphtheretic sore throat*, which were not reported. It seems to me desirable that all cases of sore throat in children be reported and a bacteriological examination made. It is certainly necessary if any membrane forms, or croup develops. Measles was never reported with any degree of exactitude. In many cases, a physician was not called in. The disease was pandemic for nearly five months. For the first three months, three or four of our physicians kept track of their cases, but after that, even they were unable to keep count.

The cases of whooping cough reported for June, July, August and September, were all in my own practice and in the thickly settled part of the city, between Main and Broad streets. I think most physicians have neglected to report this disease.

Typhoid fever has been rare within the city limits, where little but the city water is used for drinking purposes. The five cases reported were all found to have been using well water about two weeks before their disease began.

A case of small-pox arose in February. The only mode of infection which seems probable, was by letters received from a southern city where small-pox then prevailed. The patient had been vaccinated and the attack proved a mild varioloid. This case was reported to your honorable board, in full, last March.

One case of cerebro-spinal fever was removed from an over-populated and filthy tenement house to the Hartford Hospital, unknown to the health officer. Prompt notice from the hospital was received and the house, and private conveyance in which he had been removed to Hartford, were at once disinfected. No new cases have arisen.

The city water supply has been good and healthful throughout the year. Three chemical and bacteriological examinations have been made by me during the heated term.

Garbage is carefully collected and removed to an unobjectionable place. Storm water and sewage are transmitted by common



sewers to the river. The public took no care of contagious diseases other than to pay expenses of quarantine in the small-pox case, and to provide nursing, shelter and food for the patient.

The health officer kept watch of the milk supply, and while the cream percentage has been very variable, the average has been above the New York city standard. Some attention has been given during the year to examination of our milk supply for the bacillus tuberculosis.

Our results are not yet ready for publication.

TOWN OF MIDDLETOWN—DR. FRANK C. COUDERT, *Health Officer*.

In May, 1896, a complaint was received from an unknown party about a large number of vegetables which were in a state of decomposition upon the premises of Mr. ——. The same were ordered to be placed in trenches six feet deep, and lime slacked upon the offending material.

During the spring months measles and scarlet fever were quite prevalent. The number of cases could not be determined, as the physicians of Middletown do not report their cases.

In the month of July four cases of diphtheria were reported, three cases being in one family. A strict investigation was made as to the origin, but without results.

Three of these cases were treated with anti-toxin (Berhing, No. ii). These three cases had measles at the same time they had diphtheria. They were of the most severe kind, suffering greatly from septic infection. The house was cleaned from top to bottom and washed with bichloride, then fumigated. The sick rooms were freshly painted. The father and the youngest child, aged two years, did not contract the disease. As a prophylactic agent they used tr. iron and peroxide hydrogen.

In July there was one case of typhoid fever reported, origin unknown.

In August three cases of typhoid fever, origin unknown.

In July a notice was received from the State Board of Health ordering an investigation of all the district schools in the town and fumigation of the same. This was done, and all the school-houses were found in good order with the exception of two, i. e. Johnson Lane school and the — District school in Westfield. The first was in a deplorable condition and the last was very much in need of repairs.

MILFORD—DR. E. B. HEADY, *Health Officer*.

The people of Milford during the past year have not suffered from any severe epidemic. Since health rules have been established, with few exceptions, there has been a general cleaning by the residents, and pride in having their dwellings in a sanitary condition. During the month of July, 1896, a sanitary inspector was employed to inspect the central portion of the town, with good results. People dislike to complain of a neighbor, and rather than make complaint they will tolerate a nuisance often a long time. By the aid of the inspector many nuisances have been abated which would not have come to the attention of the health officer.

There have been sixteen cases of measles, all of a mild type. In the majority of cases I found the patient had a short time previously been to the city, and it is supposed the disease was thus contracted. In nearly all cases the house was placarded, and while a strict and rigid quarantine was not required, as in diphtheria and scarlet fever, a request was made that the patient be isolated, no one admitted, and the inmates remain at home much as possible.

Measles in a strong healthy child, without complications, may be a slight disease, but with those that are not strong it is different. The system is often left in a debilitated condition and other diseases develop.

By the prompt report by the physicians, and coöperation of the teachers and parents, and quarantine maintained, we were fortunate in not having an epidemic and being obliged to close the schools. Since I have been health officer contagious diseases have been so well under control that our public or district schools have not been closed.

One case of scarlet fever, contracted out of town.

There have been three cases of diphtheria. The origin in two cases could not be traced; in the last case, a child came to Milford on a visit, there having been diphtheria in his family; he played with a neighbor's child and thus communicated the disease. In each case the house was quarantined and disinfected; those that had to engage in business were instructed to board away until the house was disinfected. All of the cases were mild and of short duration.

Quarantine and extra precaution should be observed in mild cases as well as in a severe case, as the disease is very contagious, and a mild case in one child might cause a very severe case in another.

Two cases of typhoid fever complete the list for the year. These cases were in one family and came from a sink drain leading past a well, the drain became clogged and broken, and the sink water emptied directly into the well.

There have been twenty-seven cases of nuisances abated. An inspection was made of all the out-buildings belonging to the railroad stations; they were in a good sanitary condition. Ordered more windows placed in the water-closets of the public school, as they were dark and unsanitary. The four district school-houses have been inspected and improvements made in ventilation, etc., and they are in a good sanitary condition. Just before the schools commenced they were all fumigated. The Board of Education have very promptly carried out any suggestions made regarding the schools.

The water used by the public school comes from a deep well blasted into a rock. There is no drainage into it or near it, it is pure and free from contamination.

At Milford Beach garbage was deposited upon the beach and elsewhere. I made arrangements to have garbage collected each day and the out-buildings cleaned once a week, for a small consideration paid by the occupants. An inspection was made of all the ice ponds. Milford is supplied with good, pure ice from several ice ponds outside the village.

The placing of mussel shells at Milford Point has been discontinued.

Mrs. E. P. Smith very generously, at her own expense, cleaned the pond opposite her residence. A request was made to the owner of the lower mill pond to drain off the water, so as to clean the pond, but it was not granted. There is from the public school and other sources considerable contamination entering the river, and if it were not for the obstructions caused by the mill ponds, no better sewer could be found; as it is the mill ponds cause only a temporary obstruction, and even during hot dry seasons heavy rains cause a flushing of the stream. The weeds growing in the pond are not a source of danger but rather beneficial in using the deposit; if the water in the lower pond was in use and mud exposed to the air there would be danger. As long as Mil-

ford does not provide any other drainage it does not seem wise to cause the public school or others to do differently. The sanitary condition of the school would be less perfect.

I think the first thing to do to improve the financial and sanitary condition of Milford would be the introduction of pure spring water with drainage. We need water in case of fire, for domestic use, our lawns and dusty streets. Germs of disease and dust are blown into our houses and inhaled. City people will be more anxious to come here for their residence soon as there is a good supply of water. I believe that after the introduction of water, electric lights and electric cars would soon follow, and it remains with the inhabitants of Milford to allow the town to remain in its present condition, far behind its sister towns in improvements, or to make it the most desirable town on the shore.

MONROE—DR. J. G. STEVENS, *Health Officer*.

During the year ending August 31st, 1896, a state of general good health.

During the early spring months of 1896 several cases of measles of a very mild type occurred in the Center School District, mostly among the school children. The attendance at school being so small it was thought best by the committee to close the school for one or two weeks. As most of the cases were without medical attendance only a small number were reported to the health officer. In the East Village District twelve cases were reported during the months of April and May, 1896. In this district nearly all of the cases reported were of a more severe type. Investigation as to the origin of the disease in this locality showed that it was contracted while the patient was on a visit in the neighboring town of Southbury, where measles were quite prevalent.

From all parts of the town there have been reported twenty-four cases. No deaths from measles have been reported.

One case of diphtheria was reported to me on August 1st, 1896. On investigation it was found that under the same roof twelve small children were living. One of the older children had visited in Bridgeport and returned, not feeling well, suffering with a "cold" and sore throat. Under domestic treatment she recovered in a few days and was able to be out of doors as usual, when the younger sister was attacked with a severe throat trou-



ble. It was then thought quite time to call a physician, who immediately pronounced it a case of diphtheria in advanced stage, and immediately notified the Monroe health officer. The premises were placed under strict quarantine, and the children removed from the house to a barn on the opposite side of the street, until after the death of the child and a thorough fumigation and disinfection of the premises had been done under the supervision of the health officer. Owing to ignorance of the laws regarding the burial of bodies dead with contagious disease, and dispensing with the services of a regular undertaker, the body of the child was taken by the father to Bridgeport for burial without obtaining the required removal permit issued by the registrar, thereby causing unnecessary delay in the burial of the body, as well as great danger of spreading the disease. Although exposed, none of the remaining eleven children have contracted diphtheria. Total number of cases of diphtheria reported, one; number of deaths from diphtheria, one.

One case of typhoid fever was reported Sept. 7th, 1895. A resident of the borough of Shelton, while on a visit to relatives in the Center District, was prostrated with the fever. Investigation by the health officer showed that he had drank water from a contaminated well in Shelton, to which well was attributed the origin of several cases of typhoid fever in that place. This well was, about that time, ordered filled up by the borough health officer. After fumigation and disinfection of the premises in a thorough manner, no other cases occurred in the Center District.

One other case of typhoid fever was reported from the Stepney District. A resident of Bethel, while on a visit to friends, was taken suddenly and violently ill with typhoid, and died within a few days. Without doubt the disease was contracted in Bethel and developed on arrival in Stepney. The premises were thoroughly fumigated and disinfected under supervision of the health officer.

The methods of garbage and sewage disposal are about the same as in former years and is as usual in rural towns and villages, but I think there is more care taken to keep individual premises in a better sanitary condition than has been customary.

During the month of August, 1896, all the school-houses in the town have been visited by the health officer and thoroughly fumigated and placed in good sanitary condition.

Of the sanitary condition of the old town hall, it will be unnecessary to report, as it is soon to be abandoned and in its place the



town will occupy a fine new and well-built, roomy modern structure, in a good sanitary location, facing the park in the center: a building all will be proud of and an ornament to the town of Monroe.

The water supply of the town is chiefly from wells and springs and is generally pure and free from contamination.

During the month of September, 1895, complaint was made to the health officer of a carp pond in the Stepney District as being offensive and a public nuisance. On account of a dry season and a lack of water, large quantities of fish were killed and, decomposing, caused a very disagreeable odor, much to the annoyance of passers-by on the turnpike, and more so to residents of the neighborhood. After consulting with the owner of the pond, immediate steps toward abating the nuisance were taken, and shortly afterward the pond was abolished entirely.

MONTVILLE—DR. WM. M. BURCHARD, *Health Officer*.

Malarial diseases have been exceedingly prevalent along the course of the stream supplying the mills, due probably to the exhaustion of the reservoir during the early summer, but no deaths directly due to this cause, or the extreme heat, have as yet been reported.

Of infectious diseases, four cases of typhoid fever in Uncasville, in October, 1895, were traced to pollution of water supply, which was at once corrected on proper complaint.

Several cases of measles in different parts of the town were imported from adjoining towns.

Diphtheria appeared in February in Pequot village, reported by the superintendent of the Pequot Co.: two cases were dead, but the surviving one was a typical case of the disease. All possible precautions taken. No secondary cases were developed. In March, four cases on Chapel Hill and one in Chesterfield were reported among the Jewish residents. The almost impassable condition of the roads made it impossible to treat them efficiently. There was another case near the Chapel Hill school-house. The failure of one physician, who was first in attendance, in three instances, to either recognize or report the disease, made them sources of infection beyond the limits of the town or state. Another case was reported Aug. 6th, 1886, in the most unsanitary part of Uncasville: two cases being developed later, but the

prompt coöperation of the superintendent of the company, the use of anti-toxin, and the faithful attendance of the physician stamped out the disease, with a quarantine of only ten days. The weight of evidence is in favor of the importation of the disease in three instances from New York, and in one from New London.

The inspection of school-houses shows a generally improved condition over last year: Nos. 10 and 9 are in excellent condition; Nos. 6, 11 and 13 in good condition as regards cleanliness and repairs; No. 4, Pequot, has been repaired, and No. 4, "Palmertown," which is hopelessly overcrowded, is being put in as good condition as possible, but the building must be enlarged and remodeled before any efficient system of ventilation can be secured. Nos. 3 and 7 are in better condition than they were last year; Nos. 5 and 2 need repairs badly, and Nos. 1 and 12 are again in the worst sanitary condition and the proper officials have been notified.

The town buildings are in better condition than at any previous inspection.

No public works of sanitary interest except macadamized roads.

MORRIS—MR. GEO. H. JOHNSON, *Health Officer*.

On March 14th, 1896, on the report that measles was prevalent in some families in the west part of town, I found that four cases had occurred, but they did not become epidemic at this time. I also examined into the condition of the out-houses in the school districts, and found them in a fair condition, though not in a condition to be proud of.

In May the whooping cough became epidemic; there were 49 cases reported to me.

In June two cases of whooping cough were reported.

In July 17 cases of measles were reported in three or four families, but as schools were all closed and for other causes they did not become epidemic.

No complaints of any nuisance have been reported to me during the year.

The total expense of the town health officer has amounted to \$4.75, which is as small a sum as he could get through the year with.

NEW BRITAIN—DR. W. P. BUNNELL, *Health Officer*.

The town of New Britain is and has been, during the year, in a fairly good sanitary condition. There were no cases of measles reported to the health officer during the year, but as measles was quite prevalent here during the spring months there must have been many cases which were treated at home and not attended by any physician, and thus were not reported to the health officer.

Measles was quite mild as a rule; only a few cases were complicated by other diseases.

We had last fall and more or less during the winter a large number of cases of diphtheria of a malignant type, and a large number of deaths followed in spite of all the city and town boards of health could do. Isolation and quarantining were strictly carried out. The disease was first brought to us from out of the state, and this is about the only cause we could find for the outbreak here. We had, of course, the cesspool and poor drainage beyond the sewerage system, but the disease was not confined to any one section, whether in a poor sanitary condition or not.

Garbage is collected twice a week and is buried.

Sewage is carried by means of Piper Brook to the Connecticut River for part of the town, and through the Mattebesett River to the Connecticut for the southern portion.

The two school-houses are in a good sanitary condition, except the vaults, which are to be reconstructed during the coming year.

There are no public buildings except the Town house, and this is in a good sanitary condition.

The water supply is very good and pure. A large number of new sewers have been built during the year.

There has been more attention paid to the milk supply the past year than ever before. Milk has been analyzed and farms and herds have been inspected.

A number of nuisances have been abated during the year in different parts of the town.

The opening of new roads and draining of land in the eastern and north-eastern section of the town is a much needed public improvement.

NEW CANAAN—DR. CHARLES B. KEELER, *Health Officer*.

Measles has been prevalent, and at this writing the epidemic has just run its course. The disease seems to have invaded the town from the south-east, and then it appeared to move through the place in a north-easterly direction. The epidemic was of a very mild form and yielded readily to the usual treatment. It was not found necessary at any time to close the schools, and yet most of the children who had not previously been attacked, suffered with it on this account.

Only one case of scarlet fever was reported. It was found to have been brought into the town from New York. The customary steps were taken to prevent any possible spread of the disease. The house from which the case was reported was rigidly quarantined and thoroughly fumigated. I am pleased to say that these measures were successful.

The town has suffered considerably from whooping cough, a disease which, as an epidemic, seems to be a precursor of an epidemic of measles. The course of the disease through the town was somewhat similar to that of the measles, only in a different direction. The first cases were reported in the north-west and the last in the eastern part of this district. It was not accompanied by any marked fatal results.

A few cases of diphtheria were reported, the origin of which could not be ascertained. Precautionary measures were taken in every instance with the most gratifying results. No secondary cases followed.

The town suffered more or less from typhoid fever, cases developing here and there under different circumstances and different conditions. It was impossible to say what was the cause, although I am inclined to think defective sewerage had a great deal to do with it.

In regard to the annual death-rate, I regret that a favorable report cannot be made. Up to a few years ago New Canaan was one of the healthiest towns in the state and the death-rate was remarkably low—about 12 in 1,000, or fully four points below the average for the county and state. During the past two or three years there seems to have been a steady increase, until for the present year the rate is 20 in 1,000, a most unsatisfactory showing. Just what to ascribe this to, it is hard to say. And yet I am inclined to think that defective drainage, and the total absence



of a proper sewage system, combined with the floating population, has helped to cause the increased mortality. One drain in particular, on East avenue, has been, I believe, the cause of more than one death. There are no doubt other drains equally as offensive.

I do not think any of this increase can be attributed to the water supply. Of course there are a number of wells which cannot help but be more or less affected by their surroundings, especially as some of them are not a great distance from drains and vaults.

Garbage is removed from the business portion and taken to the farms, where it is used for fertilizing, etc.

Public provision for the care of cases of contagious disease is about the same as in most towns of this size. There is a small house that can be readily adapted for an isolation hospital.

The sanitary condition of the public schools, as well as that of the other public buildings, is on the whole excellent, despite the total absence of a system of sewerage.

In conclusion, I might add another word in regard to sewers. The borough is bound to grow every year, and in my opinion, sooner or later it will have to deal with this difficult problem if the health of the town is to be maintained.

NEW FAIRFIELD—DR. W. S. WATSON, *Health Officer*.

I have the pleasure to report but one case of infectious disease that has occurred in the town of New Fairfield since my last report up to September 1st, 1896. That was a case of typhoid fever of obscure origin. The school-houses and out-buildings are in good condition, and I cannot but report everything in good condition from a sanitary standpoint.

NEW HARTFORD—DR. J. BURWELL, *Health Officer*.

*Nuisances*.—Two appeals from my orders were made to the county health officer. In one I was sustained; the other is still undecided. Number of complaints, 23; number of nuisances removed, 21.

*Measles*, from April 25, 1896, to date. The first case occurred in a public school where there were 38 scholars; in the apartment where he attended 32 of them had no immunity from this disease. At the expiration of a week from the exposure I ordered the school closed for one week. There were five that caught it from



this exposure. But from that time to almost the present there have been many cases of measles. But very few have contracted it from the schools. Many have caught it in the streets. A child will be ill for a day or two and kept in the house. Then on the third or fourth day it is turned into the street and during the next 24 hours the eruption appears, and the disease is spread to different families in the neighborhood.

I think many cases are not reported. Then we have many families of Slavonic origin who are ignorant, filthy and improvident, and who employ no physician in cases of contagious diseases. Such cases are not reported to the health officer. In April, 1869, one case reported of measles. Total cases of measles reported 83, mostly mild.

*Scarlet Fever* when it occurred was thoroughly quarantined. All cases were sporadic. The cases occurred in four distinct families and did not spread. Total cases, 4.

*Typhoid Fever*.—Six cases reported during the year. Cases were mild ; but one death.

One case of cerebro-spinal fever.

We have near the center of the north village an unoccupied lot which is situated on the bank of the river. The ownership is not determined. This lot is more or less used by the community as a dumping ground for garbage, and no one is responsible for it.

*Methods of Sewage Disposal*.—In the most populous part of the village is a house with 12 or 13 inmates, connected with which is a cesspool, which receives the sewage of the house, consisting of drainings of the sinks, water-closets, etc. There is a stream of water running through the cesspool, and after passing under the road emerges on private property and is permitted to overflow the premises of two individuals, and is complained of by neighbors and passers-by on the street. The owner of the cesspool denies all responsibility in the matter. He claims that he is persecuted ; that his predecessor had the same condition of affairs and was not complained of. The town is involved in the matter. The selectman claims that the town has a right to use the ditches in which the cesspool is discharged for carrying off the surface water from the road and neighborhood, but is under no obligation to furnish a sewer for the cesspool. Thus the matter stands, without any apparent remedy but an appeal to the courts.

*Sanitary Condition of School-houses*.—Mostly good. The health officer attended to the cleaning of the school-houses, and

when there have been contagious diseases in the schools has ordered the rooms to be fumigated. The public buildings are in good sanitary condition. The water supply is good. The main villages are depending on water supply from two running streams by two water companies, one chartered.

I regret to say that we have no public park.

CITY OF NEW HAVEN—WARD BAILEY, Esq., *Clerk.*

Outside of the usual routine business of the Board, several matters of importance have been considered during the year, and perhaps foremost the matter of a contagious disease hospital.

By a special act the Legislature of 1893 authorized the City of New Haven to issue bonds to amount of \$50,000 for providing a public hospital for contagious diseases. The City Board of Health was ordered by the Court of Common Council to select and purchase a suitable site for the same, and erect thereon the necessary buildings.

Complying with that order, the Board has procured by purchase a very appropriate location. But adjoining land proprietors have protested so energetically against the erection of the hospital, on account of supposed injury to their property, that further action is awaiting the direction of the Court of Common Council.

In August last, the Court of Common Council adopted an ordinance relating to the sale of food, presented and advocated by the Board of Health. This ordinance affixes a penalty of from one to one hundred dollars for the sale of any adulterated or unwholesome food, and allows the same to be seized and condemned by officials of the Board of Health. It also prevents the sale of adulterated or impure milk.

The plumbing ordinance having been found faulty and ambiguous in many respects, a committee of the Board have spent much time in drafting a new ordinance which at present is pending before the Court of Common Council. A special ordinance licensing milk vendors and calling for the analysis of all milk delivered in the city was submitted to the Court of Common Council, but withdrawn, inasmuch as the courts had declared such an ordinance invalid, in the absence of special charter provisions.

I submit a table of routine work of the sanitary and plumbing inspectors of the Board. Also a table of contagious diseases

reported, with deaths, compiled from the monthly statements of the Health Officer.

From Sept. 1st, 1895 to Sept. 1st, 1896.

#### SANITARY INSPECTOR'S WORK.

No. of inspections made.....	4554
“ nuisances found .....	973
“ “ abated.....	649
“ “ reported to Board of Health.....	457
“ privy vaults recommended to be abolished.....	368
“ houses fumigated .....	154

#### PLUMBING INSPECTOR'S WORK.

No. of inspections of plumbing in new houses .....	457
“ “ “ “ old “ .....	405
“ “ “ on complaint .....	78
“ “ “ by order of Board.....	56
Total No. of inspections of plumbing.....	1850
No. consultation calls made .....	172

#### REPORT OF CONTAGIOUS DISEASES.

	Measles.	Scarlet Fever.	Diphtheria and Croup.	Typhoid Fever.
Cases reported.	393	197	249	152
Deaths.	17	3	26	19

TOWN OF NEW HAVEN—FRANK W. WRIGHT, M.D., *Health Officer.*

The following report, as Health Officer of the Town of New Haven, from March 1st to Sept. 30, 1896, the period this position has been filled by me, is respectfully submitted.

The transaction of the business pertaining to the sanitary affairs of the town has been uneventful, contagious diseases having been exceedingly few in both the annexed district and Westville. The usual complaints that are common in summer—such as are caused by pig-pens and privies—have to a very limited extent been made to the Health Officer. There have been made a few complaints of nuisances (imaginary) caused by neighborly

quarrels, etc. All, I think, were finally settled, without resorting to legal measures.

Measles were very prevalent in Westville for a few weeks during the early summer. This disease was reported as occurring in fourteen different families, probably representing three times as many cases. There were, besides, many cases of measles that never came under a physician's care and were never reported.

There were ten cases of scarlet fever reported, five of which were in one family. Only one of these cases proved fatal.

Thirteen cases of diphtheria were reported, in nine families. There were five deaths from this disease.

Of typhoid fever only five cases were reported. There was apparently no cause common to any two of them, one or two at least probably being contracted in the city.

Under the direction of the Health Officer, fifteen houses were fumigated after contagious diseases.

The system of allowing children from houses in which contagious diseases have occurred to return to school, only upon the certificate of the Health Officer, has been practiced in the town as well as in the city, and seems to be fairly satisfactory. Many reasonable recommendations for the improvement of the sanitary condition of our town could be made, but as public sentiment will not yet sustain them, they can only be made practicable in the future, when we all become better educated in sanitary matters.

NEWINGTON—MR. JOHN S. KIRKHAM, *Health Officer*.

The general health of the town for the year ending Aug. 31st, 1896, has been good.

There has been but one case of scarlet fever, and that a mild one. Strict precautions prevented its spread: investigation failed to reveal its origin.

The school-houses have received attention: three have been fumigated with sulphur, and the fourth has been repaired and painted within and without.

The most difficult sanitary accomplishment is the placing and keeping in good order the out-houses of our public buildings, specially the school-houses, and those in charge need to be vigilant. Several inspections find them passable, but far from perfect.



NEW MILFORD—DR. JAMES C. BARKER, *Health Officer*.

The general health of the town is, I believe, much better than a year ago.

The typhoid fever, of which we had so many cases last year, has completely died out. Measles, though prevailing to a considerable extent through the spring and early summer, was in a mild form, with no deaths resulting.

I desire to state that in every case of measles or other contagious diseases the physicians of the town have reported them promptly, and every means have been used to prevent a further spread of the disease—isolation, fumigation and disinfection have all been employed with excellent results.

Malaria in its various forms made its appearance in our midst early in the summer, and there is and has been more cases than at any time since 1880.

In regard to nuisances, I would say, that whenever I have received notice of the existence of one, I have promptly investigated it, and notified the owner to give it his immediate attention, which he did in every case much more promptly and willingly than ever before, and the general sanitary condition of the town has been improved thereby.

The physicians of the town have notified me of the following cases since my last report: measles 18, scarlet fever 1, whooping cough 2.

I would suggest, or rather repeat the suggestion I made last year, that the selectmen take immediate steps toward putting a sewer through Poplar street; it's in a dangerous condition, owing to the drains which empty upon the highway.

During the year I have inspected and ordered cleaned the following: privies 8, cesspools 3, pig-pens 4, open drains 4, sewers repaired 1, wells 2, school-houses fumigated 6. Besides the above I have inspected all the school-houses of the town, ordering them cleaned and repaired when necessary.

All garbage has been either buried or burned. Our sewers all empty into running streams and are in excellent condition. We have a house for the care of contagious diseases. The sanitary condition of our public buildings is good, and the water supply excellent.

The herds supplying the town with milk have been duly inspected and all diseased cattle killed.



NEWTOWN—DR. EDWARD M. SMITH, *Health Officer*.

Newtown participated in the epidemic of measles which was so general throughout the State last spring, the first case being reported to me in March, and the last in June. In all 29 cases were reported, but many other cases occurred without any medical attendant, and were not reported. In general the cases were mild in character and no serious results or sequelæ came to my knowledge. The first cases were directly traceable to exposure in Bridgeport. At first a rigid quarantine of cases was established, and continued until the disease became epidemic, then it was somewhat relaxed, but in all cases separation of those sick was insisted upon, and afterwards nearly all the rooms were fumigated with sulphur candles. The epidemic was a mild one in our town.

Of scarlet fever three cases were reported, two in one family, very mild in character; one in another family was moderately severe. Rigid quarantine was established, and afterwards thorough disinfection and fumigation was practiced under my personal supervision, and there was no further extension of the disease.

Of diphtheria one case was reported, mild in form, and very probably contracted in New York City, as the patient had come from there within a few days of the appearance of the disease. Strict quarantine here was also established, and afterwards thorough disinfection and fumigation under personal direction. Here also no further cases of the disease occurred.

One case of membranous croup was reported, and no cause for its origin could be discovered. The case was not severe. Quarantine, with after disinfection and fumigation, prevented any further cases.

Our death-rate recently has been somewhat in excess of that of the State as a whole; for this I can offer no explanation, except the deaths of a large number of persons at an advanced age—a condition likely to occur in an old settled town at any time.

The methods of garbage and sewage disposal are those usual in small towns, mainly cesspools and some surface drainage. Privy vaults are altogether too common, but the use of earth or ashes in a removable box is becoming not quite so unusual as heretofore, and is an improvement. Have as yet seen no evil results from these practices, which, however, are not to be commended.

There appears to be nothing unsanitary in the condition of our few public buildings.

All of the school-houses in town have been visited by the health officer, and, acting under circular of the State Board of Health, have been fumigated with burning sulphur before the opening of the school year. The school-houses were generally found in good sanitary condition, except that in one or two of the more crowded rooms the ventilation was not quite such as could be wished for. At some school-houses the privy vaults were in excellent condition and showed care by the committee-man in charge. At others the vaults were in only fair condition, and here directions were given for cleaning and the use of chloride of lime.

Our water supply is mainly derived from dug wells, although some are so fortunate as to have a good supply of spring water. The wells generally appear to be in good condition, and as a rule are well located.

No sanitary works of a public nature have been undertaken during the year.

NORFOLK—DR. J. C. KENDALL, *Health Officer*.

This report follows the lines suggested by the State Board of Health, as follows :

There have been seven outbreaks of measles in Norfolk during the past year, all occurring between March 10th and August, some cases in each month. The cases were traceable in six instances to five towns in this state and Massachusetts ; one child suffered his exposure on a journey of 2,000 miles by rail. In one instance the contagion is believed to have been brought by a third party who had previously by some years had the disease ; in another instance members of a household visited out of town and after the usual interval of incubation of measles, a member of the family who had remained at home developed measles.

In no instance did the measles go beyond the household where it was first discovered. The type of the disease was uniformly light. There were in all 18 cases.

In my last annual report I mentioned the occurrence of an epidemic of contagious disease very much resembling scarlet fever. There were about eighty cases. None of our physicians considered it scarlet fever. No cases were reported to me. In

October, 1895, there was an outbreak of apparently the same disease in two families and in November in another, all without any connection as far as is known.

In April, 1896, we had one case of severe and in all respects typical scarlet fever.

On May 23d Norfolk was discovered to be in an epidemic of whooping cough. Altogether there were seventy-two cases. I am filled with greater amazement every time I contemplate it that there is so great reluctance to isolation for a few days or weeks that other children may not be endangered. The liberty of a mere child to run the streets must fix a destiny for society. It is styled an outrage that an angry four-year-old boy who is kicking to go into the street should be restrained by statute.

There was one fatal case of typhoid fever.

Considerable garbage is collected about the village by men who fatten hogs. The privy and the cesspool are still our respository for sewage. In a very few instances sewage is run into the natural water course.

Last fall, I inspected the privy accommodations at the railroad stations within our township, the school properties and the sources of our ice supply.

The spirit that rules the annual district school meeting in many instances deserves unrestrained censure. It is unworthy of men, managers, parents and providers that the water should be allowed year after year to run along the floors of school rooms and to wet the desks and seats. I found one schoolhouse whose front door was kept closed by a stone on the floor, which was put in place and then the teacher would pass out by the back door, which remained closed because it rubbed.

The other public buildings are in good sanitary condition.

The ice that is sold in the street in Norfolk is cut and stored at Pond Hill, and at Tobey Pond. There are no animal contaminations from barnyards, etc. The ice of these ponds is considered unsurpassed for purity.

During this year our water works have been brought to completion. The water now flows by gravity from Lake Wangum. The supply is inexhaustible: the quality is unsurpassed.

As far as I learn, only two herds of milch-cows (they were large ones) have been tested under the tuberculosis act.

When I have contagious diseases in houses, I warn the people against possible contamination of the milk by the contagium of those diseases.

[A good deal of the very interesting and able report of Dr. Kendall is omitted for want of space. Many of his just and sound criticisms on the popular objections to the necessary precautions against the spread of contagious diseases are omitted with regret. Fortunately the full report is published in the Annual Report of Norfolk.—C. A. L. *Sec'y.*]

NORTH BRANFORD—DR. CHAS. W. GAYLORD, *Health Officer.*

I have very little to report as Health Officer for the town of North Branford.

The only contagious diseases to which my attention has been called has been six cases of measles occurring in two families, two in one and four in the other. The primary case was undoubtedly contracted in New Haven, as it developed in just two weeks after a visit of a day in the city, where the disease was at that time quite prevalent. First patient was taken sick at residence of his uncle—sickness proving to be measles, his brother contracted it and there were four cases in family of his uncle. Did not spread beyond these two families.

NORTH CANAAN—DR. CHARLES W. CAMP, *Health Officer.*

*Measles.*—I have to report about sixty cases of measles originating from one case, a student from the Albany Business College. Every precaution was taken to prevent the disease from spreading, but the town had been so thoroughly exposed that it could not be prevented.

*Scarlet Fever.*—There were seven cases of scarlet fever with one death. Six cases were in one family. I was unable to find the origin. The cases were quarantined and afterward premises thoroughly disinfected. There were no secondary cases.

*Whooping Cough.*—There were quite a number of cases; most of them had no physician. The cases originated in Norfolk, Ct.

*Typhoid Fever.*—There has been three cases of typhoid fever. One patient came here from Torrington, Conn., one was a man who had been travelling through the West, and one a man in the employ of the Housatonic R. R. Co. and was in Canaan only part of the time. None of these cases originated in Canaan. These are all the contagious diseases that have been reported this year.

The school-houses are in good condition with the exception of closets, which I ordered cleaned. I also had the school-houses



cleaned thoroughly and fumigated with sulphur where it was necessary.

The other public buildings are in good sanitary condition.

The water supply is the best and purest in the state.

NORTH HAVEN—DR. R. B. GOODYEAR, *Health Officer*.

The official work of the year has been the posting of notices of regulations of sanitary laws, monthly reports to the Secretary of the State Board of Health, the investigation of complaints, the abatement of nuisances, the quarantining and disinfecting of premises in which contagious and infectious diseases have occurred, inspection of public buildings, including the school houses and premises, and the fumigation, with disinfectants, of all the school buildings in the town in accordance with the recommendation of the State Board of Health.

The contagious diseases reported during the year are measles, scarlet fever, erysipelas, membranous croup and diphtheria.

These cases have been promptly quarantined on receiving notice of their occurrence. Isolation has been practiced where circumstances would permit, and the premises have been disinfected as soon as the patients were sufficiently recovered.

The utility of quarantine and disinfection, with isolation of patients, has been fairly proven in the experience of the past year. In those families where early isolation was not possible there was further infection of members of the family, although quarantine and disinfection prevented further spread, and where early isolation was adopted and continued until the patients were quite recovered and disinfection of the premises and of the patients were made, no further cases occurred.

Thus it will be seen that the spread of serious contagious diseases can be prevented by prompt and efficient interference.

In most cases there has been a hearty disposition to cooperate with the health officer in these preventive measures. The inconvenience of a prolonged quarantine is no small item to those who can ill afford to lose their daily earnings, but it is more than compensated by the protection which it affords to the community. The number of houses quarantined has been (8) : For measles (1), scarlet fever (3), diphtheria and membranous croup (4).

The number of cases reported for the year has been : Measles (2), scarlet fever (7), diphtheria and membranous croup (4). Total (13).



It is probable that several cases of measles in a mild form have not been reported owing to their having no medical attendance.

A modified form of la grippe prevailed in the early part of the year, extending well into the spring months.

Malarial diseases have been prevalent during the year. They have been mostly of an intermittent type, but in exceptional cases have been attended by an unusual degree of nervous prostration (neurasthenia) from which recovery has been tedious and prolonged. This condition has been so where attacks of la grippe have preceded or accompanied those of malaria. At present time of writing diseases of malarial origin are assuming a typhoid condition, with serious congestive attacks. They exhibit the usual periodical symptoms of intermittent fevers with cerebral and intestinal characteristics of typhoid.

The laws in regard to the keeping of swine and the collection of garbage have been violated in several instances and the attention of the health officer has been directed to the unsanitary condition of the localities where such practices are carried on. Notices have been served and the conditions improved.

It would seem that self-interest, and a due regard for the rights of one's neighbors—that every man occupying or owning a home, and having a family living thereon, would be sufficient incentive to keep that home in the best possible sanitary condition for health and longevity, and that there should be no need for the State to impose the burden of a health officer upon a community for its protection ; but when a serious epidemic of typhoid fever occurs in a large community, the cause is traced to a polluted well, with which the milk supply is infected, an object lesson is furnished which shows the necessity for strict sanitary precautions.

The sanitary condition of the school-houses has been somewhat improved by cleaning and whitewashing of the rooms, and by care in keeping the outside premises in a better condition.

At the suggestion of the State Board of Health, the schools have been thoroughly disinfected. The buildings have been all fumigated in compliance with this order.

The number of school buildings is seven. The number of rooms occupied is ten. All have been treated with disinfectants.

The school room in District number three is too small for the accommodation of the pupils and is very poorly ventilated.

The other public buildings in the town are in good sanitary condition.

NORTH STONINGTON—DR. E. H. KNOWLES, *Health Officer*.

The sanitary condition has remained about the same as in former years. The stream running through the village is made, to some extent, the dumping ground for garbage. Being in the rear of many houses, it runs in close proximity to several pig-pens and privies, but as yet has caused no trouble. I have been called upon to abate two nuisances. The first was last March. I was notified that a horse had been killed, in the eastern part of the town, early in the winter, by an agent of the Humane Society, and left unburied until the warm weather had made it a nuisance. I had the animal buried. The second was a pig-pen, located in the village near the stream, and in close proximity to several dwellings. This had become very offensive. The owner was ordered to cover the surface with fresh earth, which removed the trouble for a time. Later it became troublesome and the same remedy was applied.

There were only two cases of measles in town, both occurring in July. One of these was contracted in another town, and from this only one secondary case developed. There have been four cases of scarlet fever, three in the Third and one in the Fifteenth School District. In looking for the cause of one of these cases, I found that a child from Preston who had partially recovered from the disease had been playing with two children in the Third District and had communicated the disease to them. They had it in a mild form. Their grandmother congratulated herself that she had carried them safely through a case of measles without a doctor. Another case was a child who had attended school and played with these two. I immediately visited the school and found one of them in the stage of desquamation. It being near the close of the term, I ordered the children kept at home. The case in the Fifteenth District was contracted from the same child from Preston (which, by the way, was a colored child belonging to a family that largely gained their living by roaming about the country). The parents of the child cordially coöperated with me in preventing the disease spreading any farther. The three houses in which the cases occurred were ordered disinfected by fumigation, and I saw to it that the orders were fully carried out.

The school-houses in both districts have also been thoroughly fumigated and I think there is no further danger from these

cases. There should be a law giving the health officer more authority in regard to enforcing his orders in sparsely settled country towns. In this case the Preston health officer ordered the family to keep at home until the danger point was passed, and the house properly fumigated, but felt that he had no authority to put them under police control to see that his orders were enforced, and they continued to roam around the country as before.

I have known of only two cases of typhoid fever, one of which was fatal. They were both brought into town from Rhode Island after being taken sick, the parents of both living in the eastern portion of the town. These cases were attended by a physician from Rhode Island, and were not reported as the law requires. It was through chance that I learned of them.

The method of disposing of garbage and sewerage is entirely upon the surface.

The sanitary condition of the school-houses in the several districts has been much improved, and in the others is quite as good as in former years.

The water supply is principally from wells and springs and is of excellent quality.

CITY OF NORWALK—DR. WM. J. TRACEY, *Health Officer*.

During the months of January, February and March, a severe epidemic of measles prevailed throughout the cities and town. In the cases first reported a strict quarantine was maintained, but as soon as the disease became epidemic the houses were merely placarded.

Fifteen cases of diphtheria were reported during the year; the disease was of a severe type. It broke out among the children of the Center school; three cases were reported within twenty-four hours, all of the cases occurring in children who were in the same room. The school was promptly closed and disinfected before it was reopened. A strict quarantine was maintained in each case until the house was thoroughly disinfected after convalescence was fully established.

One case of typhoid fever was reported.

The foregoing were the only diseases of an infectious nature reported.

A sanitary inspection of the school-houses was made; they were found to be in good condition.

During the past year our reservoir has furnished us with a bountiful supply of good water.

In an inspection made of our milk dairies particular attention was paid to the water supply. Samples of milk have been secured from the milkmen several times during the year ; on being tested it was found to be in most cases up to the standard.

The worse nuisance, and the one that gives us the most trouble, is the garbage nuisance. The city should make provision for a systematic collection and proper disposal of it.

A sanitary inspection of the city has been made. Where cess-pools and privies were found close to dwellings, orders were issued for them to be cleaned and their use discontinued, and connections with the sewers to be made.

TOWN OF NORWALK—DR. WM. J. TRACEY, *Health Officer*.

During the months of January, February and March, a severe epidemic of measles prevailed throughout the town. It made its appearance first in Cranbury, at an entertainment given there early in January; three children afflicted with the disease from Westport were present. Shortly after this entertainment the disease broke out, and spread with great rapidity to all parts of the town. The cases first reported were strictly quarantined. As soon as the disease assumed an epidemic character the houses were placarded to warn the public where the disease existed, but quarantine restrictions were discontinued.

Six cases of scarlet fever were reported during the year. The type of the disease was mild ; origin unknown. A strict quarantine was maintained in each case, and the place thoroughly disinfected after convalescence.

Diphtheria made its appearance during the latter part of March. The disease was of a severe type: twenty-seven cases were reported. The origin of the disease was from two sources: one from the South Norwalk schools, where the disease was prevailing; the other from a family afflicted with the disease in Brooklyn, a member of which paid a visit to friends in East Norwalk. Two days after his arrival the disease broke out in the family and spread to two other families in the neighborhood. In every case of diphtheria reported a strict quarantine was enforced and maintained until the place was thoroughly disinfected after convalescence or death of the patient.



During the year four cases of typhoid fever were reported.

The foregoing were the only cases of contagious or infectious disease reported.

During the spring and summer malaria troubles were very prevalent, especially the intermittent fever. On receiving complaint an inspection was made of twenty-four nuisances, and orders were issued for their abatement. They consisted chiefly of the burial of dead animals, the abolishing of improper sink drains, the cleansing of privies and cesspools, and the removal of garbage and refuse matter.

A sanitary inspection of the school buildings was made during the year. The East Norwalk school was found to be in an overcrowded condition. The ventilation and light of one room was so defective that in my opinion it was not suitable for a school room; this room (formerly a hall) was thirty feet long by ten feet wide; into this room was crowded thirty children; on dark or cloudy days it was necessary to use lamps to enable the children to pursue their studies.

To protect the health of these little ones, I issued an order to the committee forbidding the use of this room for a school-room; also limiting the number of scholars in another room which seemed to me to be overcrowded. The committee, complying with the above order, rented "Randall's Hall," converting it into two school-rooms, and by utilizing these relieved the overcrowded condition that existed. The school and its surroundings should be perfect if possible in the sanitary arrangements, not only for the promotion of health, but to impress upon the minds of the children the importance of sanitary matters.

The garbage question is one of great importance, and one we cannot with impunity ignore. We should have in the cities at least a systematic collection and proper disposal of it. At the present it is dumped anywhere and everywhere.

The milk dairies were inspected during the year, particular attention being paid to the water supply. In two instances privies were found so close to the wells that there was danger of the water becoming contaminated; orders were therefore issued for their removal.

The worst nuisance in the State, in my opinion, exists in East Norwalk. It consists of a pond situated in a thickly settled neighborhood between Second and Third avenues. Surrounding this pond and within a few feet of it, are to be found barnyards,



chicken-coops and privies—one of the latter was actually in the pond itself. This open cesspool receives the surface drainage of the neighborhood, and the sink drainage, garbage, and refuse matter from the houses surrounding it. It does not seem possible that in this age of advancement such a pest-hole could exist in a civilized community; but I am sorry to state such is the case. Since my attention was called to this nuisance last May, I have done all in my power to have it abated; but so far my efforts have been in vain. The property owners, as the statute requires, have been notified to cause this pond to be filled in; but they failed to comply with the order. The selectmen were notified of the existence of this nuisance, and their attention was called to the necessity of having it abated, and to the statute which gave them the power to do it. The nuisance, however, still exists, a menace to health and a disgrace to the town. Economy in the administration of public affairs is commendable; but in matters pertaining to public health it is oftentimes more costly than extravagance.

East Norwalk has grown so rapidly that some system of public sewerage must be adopted in the near future. Every small yard at present contains a cesspool, a privy, and in some instances a well. On account of their proximity to each other and to the houses, they constitute a nuisance, which is not only offensive but detrimental to health. In proportion as such nuisances increase, the danger of epidemic disease increases.

In conclusion I would state that the public are more enlightened than formerly on the subject of public hygiene.

The services of the health officer are appreciated and his suggestions are respected.

CITY OF NORWICH—DR. C. E. STARK, *Health Officer*.

*Diphtheria*, including Membranous Croup.—Thirty cases reported.

*Scarlet Fever*.—Thirty-five cases reported.

*Measles*.—Thirteen cases reported.

*Typhoid Fever*.—Seven cases reported.

No other contagious or infectious diseases have occurred.

In all cases of contagious diseases we have been able, we believe, to limit it to the case or house in which it originated. So we have had no epidemics.

Upon the appearance of a contagious disease the health officer is notified by the attending physician within twelve hours. He visits, inspects, and placards the houses, leaving printed instructions about the sanitary care of the case. When possible the patient is placed in a room isolated as much as possible from the living rooms, and the attendant required to avoid contact with other people.

Our garbage is disposed of by depositing it in an enclosed space in the river below the surface of the water; it is then covered with earth or ashes. We have found this method very satisfactory; at the same time we are making land for the city. We are very fortunate in our sewage disposal. Situated as we are at the head of tide water, our sewers all discharge into the river, and the large body of water flowing down the Shetucket and Yantic rivers, together with the outgoing tide of the Thames river, effectually remove it.

Our school-houses were thoroughly fumigated during the summer vacation, and are in fairly good sanitary condition. Two new school-buildings are now in process of construction and another is contemplated, all with modern and the most approved sanitary appliances.

As a rule the sanitary condition of our public buildings is good.

New sewers are being constructed every year, vaults discontinued, and sewer connections made. So the sanitary condition of our city is constantly being improved by permanently abating nuisances.

Milkmen have been forbidden carrying garbage in milk wagons, as was their custom, and they have been advised how they can improve their milk by better care at the stables.

The quality of our city water during the past year has been very good. During the past summer the water in the reservoir was very low, and its taste somewhat affected by vegetable matter, yet I have heard of no cases of sickness due to this.

#### TOWN OF NORWICH—DR. E. H. LINNELL, *Health Officer*.

The past year has been a very healthy one in Norwich as regards contagious diseases. This is accounted for partly by the more general reporting of such diseases to the health officer, thus giving an opportunity for more thorough sanitary precautions. Only thirty-one cases of contagious disease have been reported to

me, occurring in the practice of eleven physicians. It is thus evident that there has been no epidemic, and with one exception, the cases have been mild. Only one death has been reported, and that was from diphtheria in a feeble child.

There have been no contagious or infectious diseases other than those already mentioned. Some of the cases of diphtheria seemed to be caused by defective plumbing. In every instance this has been corrected. The immediate exciting cause in other instances has not been ascertained. Except in the case of measles, I cannot recall an instance where a second case has been communicated from the first, which speaks well for the methods of isolation and disinfection employed. I have had circulars printed with directions to be observed in the care of the person, clothing, bedding, etc.; in regard to association with others, and for the disinfection of the premises after the recovery or death of the patient. Whenever a case of contagious disease has been reported it has been promptly investigated, and one of the above mentioned circulars left with the attendant. The cause has been sought for and removed if discovered, and the house quarantined by posting a card upon the door, bearing the name of the disease in bold type. This has not been removed until notification by the attendant physician that suitable disinfection has been practiced.

In a few instances patients have been removed to the Backus hospital, where they could not be satisfactorily cared for at home.

Fewer complaints of nuisances have been reported than in former years. These were all promptly investigated and the nuisances abated.

Garbage is buried. No injurious results have followed this method so far as known.

As there are no sewers outside of the city limits, the method of disposing of sewage is by receiving it into vaults and cesspools, which are emptied and disinfected at suitable intervals.

All the school-houses have been fumigated with sulphur during the past month, according to instructions received from the State Board of Health. With few exceptions they were all in good sanitary condition. Those that were not were ordered to be cleaned before the opening of school.

The various railroad stations were inspected in October last in obedience to the suggestion of the county health officer. They were all found in good order, and so reported to him.

Our public water supply has been much more satisfactory than last summer, and no complaints in regard to its unhealthfulness have been received.

A public park called "Sachem Park" has been opened during the last year under the auspices of the Street Railway Company. It is situated on the outskirts of the city, and affords an attractive and healthy resort, which has been extensively patronized.

I have found no necessity to adopt any precautions in regard to milk supply except in one instance, where a case of scarlet fever occurred in the family of the dealer. Here the milk was not brought into the house during the sickness of the child.

Of the thirty-one cases reported there were six of measles, thirteen of scarlet fever, nine of diphtheria, and three of typhoid fever.

OLD LYME—MR. W. H. H. WALLACE, *Health Officer*.

*Measles*.—An epidemic of moderate severity prevailed during the spring and early summer. About 50 cases occurred to my knowledge; no deaths. The first case was contracted in Clinton. Cases were quarantined as far as possible, but as most of the poorer classes preferred that their children have the measles when small, any quarantine was not very successful.

*Scarlet Fever*.—Three cases; origin of one case traced to New London, others not known.

*Whooping Cough*.—Several cases.

Methods of garbage disposal, usually by fire.

Methods of sewage disposal, cesspools.

Sanitary condition of school-houses good.

Sanitary condition of other public buildings good.

The water supply, wells.

OLD SAYBROOK—DR. JOHN H. GRANNISS, *Health Officer*.

Very little official sanitary work has been required of the town health officer during the past year.

Quite an extensive epidemic of measles occurred in April and May; there were brought to my notice about 125 cases; the type was of moderate severity, with no deaths. Six cases of scarlet fever of a mild type have occurred, with no fatality. Four cases of diphtheria were seen during the winter, all of whom recovered. Also four cases of typhoid fever, two in the autumn of 1895 and two during August, 1896; all recovered.



The death-rate has been but a fraction more than twelve per one thousand.

I can find no fault with the sanitary condition of the school-houses or other public buildings. The water supply is obtained entirely from wells.

ORANGE—DR. JOHN F. BARNETT, *Health Officer*.

The reports of contagious diseases to the health officer, from Aug. 31st, 1895, to Sept. 1st, 1896, were as follows :

Measles, 52 ; scarlet fever, 16 ; diphtheria, 4 ; typhoid fever, 3.

A widespread epidemic of measles has recently occurred throughout the state, and Orange has proportionately suffered.

No disease is more contagious than measles, especially during its early stages. The carelessness of those having the management of these cases is largely responsible for its spread. The idea is abroad that measles must inevitably occur in childhood, and that it is not dangerous to life. With these ideas in mind no particular precautions are taken against exposure to its contagion.

No particular quarantine is established, and a primary case of measles is sure to infect families, neighborhoods and schools. Out of Room No. 1 of the Union School, numbering 23 children, only seven escaped measles. Children having the disease were allowed to stay in school too long and return too early, and there was no escape for the others.

A few cases of scarlet fever are reported every year. In almost every instance the contagion is contracted elsewhere, and as every precaution is taken with primary cases, and strict quarantine insisted upon from start to finish, it rarely reaches the proportions of an epidemic.

It is a matter for congratulation that out of sixteen cases occurring in the year no deaths were reported ; nor has there been in a single instance any spread from primary cases.

Of the three cases of diphtheria, one was brought to the town suffering from the disease. The others were mild in type, and no deaths occurred.

Of late years typhoid fever has become a rare disease in this town. This is more our good fortune than that conditions favorable to its development are absent. Three cases occurred throughout the year.

Contagious diseases cannot prevail to any alarming extent if the restrictive precautions taught by modern sanitary science are



carried out. Most people are now willing to admit that these diseases can be checked in their spread, but we are well aware that the whole public is not yet in full accord with any measures insisted upon by health authorities. Our own Borough Board refused to adopt a set of quarantine regulations approved by the State Board of Health, and they were supported in such action by two leading physicians of the town. The regulations were characterized as arbitrary, and a member of the board did not hesitate to express his indifference to all such sanitary laws.

*Nuisances.*—The health officer has received upwards of one hundred complaints during the past year. In every instance such nuisances have been abated without recourse to the courts. Naturally the largest number of these nuisances have occurred within the borough limits, and consist largely in defective drainage and garbage accumulations.

*Garbage and Sewage Disposal.*—The methods of garbage and sewage disposal are primitive. There is no public system of sewerage, and in the level confines of the borough the drainage is wretched. The soil—for the most part a sandy shale,—in thickly populated districts is rapidly reaching the limit of saturation. While no safer disposal of sewage can be made than on the surface of the ground, exposed to the sunlight and air, yet, beyond certain limits, when the soil becomes supersaturated, these waste matters are not oxidized and emanations result that are dangerous to health. A careful study of the greatest number and most pernicious forms of malarial disease is in proximity to such localities. There were eight deaths from malarial fever during the year. In the open country the surface disposal of sewage is comparatively safe, and the same may be said of such methods in the borough if yards are sufficiently roomy to allow of safe distances from house and well. These conditions do not always exist, and without any public sewer system recourse is had to cesspools.

*Cesspools.*—To connect one's living apartments with a cesspool is a dangerous experiment. Contrary to law and reason, many cesspools in our borough have been located near the front cellar walls of houses. When the soil becomes saturated with moisture from a percolating cesspool, or the ground (in such condition) frozen, it only needs a favorable tend of the soil and a weak joint in the cellar wall to accomplish infection of the house. This work is slow and insidious, but it has too often proven that a cesspool can be a death trap.

*Condition of School and other Buildings.*—The sanitary condition of our public buildings is practically the same as reported a year ago. In view of sickness during the past year, every school room in the town has been fumigated, and parents can be reasonably certain that their children will not be exposed to infection, when the fall term opens.

*Water Supply.*—Where the source of water for drinking and culinary purposes is a well, safely distant from all dangers of pollution, its possessor is fortunate indeed. A pure source of water supply should be guarded from contamination as one values the health of his household. Too many wells in our borough are suspiciously near privies, cesspools, and garbage collections. Such wells had far better be abandoned than used. There are many yards and neighborhoods in the borough where no kind of a well could be safely located. It is to be regretted that under these unfortunate circumstances we have no public water supply which meets with favor every month in the year.

The water furnished by the West Haven Water Co. is unpalatable through most of the warm months. Chemical analysis pronounces it free from organic poisons and dangerous germs, yet it holds in solution coloring and other objectionable matters, which give it an appearance, odor and taste that almost forbids its use to most persons in the summer months. Much pains and expense have been outlayed by the company to correct this fault, and it has proven a disappointment to the borough that the promise of improvement has not been more fully realized during the past season.

No public work of a sanitary nature has been undertaken by the town. The time is rapidly coming when the building of sewers must be seriously considered by the borough. The cess-pool nuisance is becoming more and more a menace to our health.

The disposal of garbage also claims earnest consideration. This ought to be collected and disposed of in a systematic way at public cost.

*Prevailing Sickness.*—The largest amount of sickness in Orange is due to malarial causes. Hardly a household in the whole town but has been afflicted with this disease, and in eight instances with fatal results. Whether the actual causes have been satisfactorily determined or not by sanitarians, it is a matter of daily observation that those are most afflicted who from any cause are reduced by overwork, exposure, or other sickness, and when this

insidious and persistent poison begins its work, there is little hope of betterment or cure under unsanitary surroundings. Individual and public work looking to an improvement in our surroundings would as certainly as the sun rises reduce the death-rate in our town.

OXFORD—DR. LEWIS BARNES, *Health Officer*.

About half a century ago, a malignant form of typhoid, from its location termed the New Milford fever, decimated one of the fairest villages in the State ; and at a time less remote, diphtheria was everywhere a death-burdened name. To-day by reason of our sanitary laws and teachings, all this is vastly changed for the better, and the old history of disease and death cannot be repeated. Thus much I have stated as a comment on the fact that there are some otherwise intelligent persons in our community who are apparently averse to sanitary methods or requirements. The yellow card is obnoxious when on their premises. It is an outrage on decency to be so posted, and also a curtailment of vested rights. Why not let us live, die and be buried as our forefathers were ? If a friend dies of a pestilential disease, affection craves a public funeral, and forgetful of the possible recurrence of the evil, evades every restriction. It might suffice the purpose if all such persons were instructed in an extended course of sanitary teaching, like the children of Israel in the wilderness under the Mosaic code. But I gladly state, that by means of the press most of our people are yearly becoming more interested in the induction of immunity from disease through their food and water supply, and in the protection of their homes from unhealthy surroundings.

Aside from infectious diseases, my attention as health officer has been solicited in four instances to abate nuisances arising from dead animals. Those partially burned in a fire were buried, after four kind, pleading, threatening and imperative notices. After a proper request, three dead horses were not cared for, the excuse being that their location was fully half a mile from any residence, and the nuisance was being very speedily and fully abated by predatory birds and animals. Hereafter, one written notice, if unheeded, will be followed by an unpleasantness, since your health officer is bound to discharge the duties that devolve on him, and to not only ask but demand your assistance in the furtherance of health-giving laws.

Of contagious or infectious diseases, measles and typhoid fever alone claim notice. Measles prevailed in a mildly epidemic form from March until August, and then ceased for want of susceptibles. Five cities and two towns furnished the infection. In two importations no secondary cases followed. The Salvation Army of Bridgeport gave the school at Zoar Bridge the German measles, which were asserted to be the popular sort, until a month later, when the same troupe supplied the regular article. The same subjects were the recipients of both diseases. Three schools were infected, and thus the disease was more general. Strict quarantine is not enforced. Infection where known is avoided, and Defoe's sentiment, "I am out of humanity's reach, I must finish my journey alone," seems in a measure realized.

In the beginning of the official year a family of five—it being their entire number—had a malignant form of typhoid fever. The cause was evidently their water supply, which was a spring in the margin and on the level of a small stream that had been for two years in succession polluted with typhoid germs, which are known to some extent to survive both burial and freezing. Two of the family died for want of pure water. The death-rate for the official year was 16; under 20, 2; (20 to 30, 2); (30 to 70, 3); (70 to 90, 7); over 90, 2; thus showing that longevity is a large factor in our mortality rate and that the sanitary condition is fair.

*Garbage.*—Fowls and domestic animals are close economizers of garbage in the country towns.

*Sewage.*—Open surface drains from the sink and in too close proximity to the wells are still common, but there are some who realize that the waste of the sink, if inexpensively used in near-by tillage, means more free silver and less sickness. The topography of the town gives rapid streams, and frequent rains enable us to wash and be clean.

The school-houses are, with one or two exceptions, not surpassed in their sanitary or architectural deficiencies by many towns in the State. Built with their floors near the ground, there is always an element of dampness and an ancient odor of mold. They cannot be classed with objects of beauty or health. Their cubical dimensions are ample and no stupid scholar can complain for want of air, for the ventilation in most of the rooms is too excessive for comfort or health. They have been cleansed and fumigated, as suggested by the State Board of Health. As the houses of



worship which the fathers built are objects of reverence, so they are beautified, preserved, and kept fitted for their purpose, as cherished memorials by their children, both the present and absent. Thus much for our public buildings. The water supply is regarded to-day as a pre-eminent factor of health, and especially so where each landlord has to provide his own supply. Wells are being discarded, and conduits from springs of known purity supply their place. Pure water is a necessity, and our town is amply furnished. In our hillside town, it was foreordained that the milk supply should be good, and in the near-by cities and villages our dairy products are unrivalled for their sweetness and purity. Tuberculosis, toxine and typhoid are only read of, but not dispensed by our intelligent farmers, who use as precautionary measures clean food, water and shelter for their cattle.

PLAINVILLE—DR. J. N. BULL, *Health Officer*.

It is impossible to ascertain the number of cases of measles in our endemic of the past year, but two hundred is not an exaggerated estimate, and it is unusual in so many and severe cases to find no mortality and no serious after-effects; and the same results obtained in the endemic of whooping cough, no fatal cases or serious sequelæ. Sixteen cases of diphtheria developed in our town the past year, with three fatal cases, about the usual death-rate. In no case was anti-toxine used, and reasonable doubt may be entertained if its use would have diminished the fatality. An examination of premises where diphtheria developed showed no bad sanitary condition and cast little light on the cause of the disease. Malaria is generally prevalent, manifesting itself in all the known varieties of that protean disorder, and though causing no deaths, has caused much of suffering and disability. No cases of other infectious diseases appeared. But little has been undertaken in the year to enlarge our methods of sewage disposal or removal of surface water, and it is a cause for regret that the little attempt in that direction has utterly failed.

The sanitary condition of our public buildings is the best possible under existing circumstances.

Many complaints of nuisances have been received, and the cause of these complaints quickly removed.

Expenses for the year, four dollars.

The health officer is grateful for the kindness at all times extended to him in his work.



PLYMOUTH—DR. GEO. D. FERGUSON, *Health Officer*.

This report covers the twelve months ending with September 1st, 1896.

The same regulations remain in force as before with this addition. "That the owners of property or tenements shall bear the expense of their disinfection."

The regulations also require all complaints to be made in writing and signed with complainant's name.

This is the only voucher a health officer has for work that he is called upon to do, and in the future will be required of all alike.

*Contagious Diseases.*—During the past year there were reported eighteen cases of measles, six cases of scarlatina, two cases of diphtheria and croup, three cases of whooping cough, and five cases of mumps. There has not been reported any other contagious disease.

I am satisfied, however, that there are many cases of the milder contagious diseases not reported, owing to the fact that no physician is called to attend them.

*Garbage Disposal.*—The methods of garbage disposal are the same as in other country towns.

Sewage disposal is in the same rudimentary state.

The school buildings have been fumigated and disinfected with one exception, which will be attended to at once, when they will all be in good sanitary condition.

The other public buildings are as cleanly from a sanitary point of view as the average.

*Water Supply.*—The supply of water is mostly from wells, and as yet in a pretty good condition.

*Ice Supply.*—The ice supply has been condemned by the State Board of Health as well as by the local health officer, and no more ice gathered from polluted sources will be allowed distribution for domestic purposes.

No public works of a sanitary influence have been undertaken during the past year.

POMFRET—MR. CHAS. O. THOMPSON, *Health Officer*.

*Measles.*—Thirteen cases reported; four of these originated out of town. I have reason to believe several mild cases were not reported.

*Scarlet Fever.*—One case reported, origin unknown.

*Diphtheria.*—Three cases reported ; two in one family of children who were attending school at the time. Quarantine was established, and the school in that district closed for two weeks and school-house disinfected. No secondary cases occurred.

*Whooping Cough.*—Fifteen cases reported. I am quite sure there were many cases not reported.

*Typhoid Fever.*—Three cases reported ; no secondary cases.

*Nuisances.*—I have had two complaints. Orders for abatement were promptly complied with.

PORTLAND—DR. FRANK E. POTTER, *Health Officer.*

During the year ending Aug. 31, 1896, we have had but two deaths from contagious diseases. One from membranous croup, the other from scarlet fever.

The following cases of contagious diseases have been reported during the year :

*Measles.*—Two cases of measles were reported April 15, 1896 ; both in same family on Main street. These children were exposed to the disease at their home in Middletown, and were taken sick while visiting in Portland. They were confined to the house until after recovery, with no further spread of the disease.

*Scarlet Fever.*—Three cases of scarlet fever have been reported. In no one of these three cases could the source of the disease be discovered. From neither of these three primary cases did a secondary one arise.

*Diphtheria and Membranous Croup.*—There was one fatal case of membranous croup.

*Whooping Cough.*—Some twelve or more cases of whooping cough have come to my knowledge. No one of these was reported to the health officer. Nearly all of these cases were confined to the Pacousett School District. These were all traced to one unreported case ; a boy, living in the eastern part of the district, was permitted to attend school while suffering from the disease : through this primary case the disease spread to a number of families throughout the district. The teachers in the other schools were warned of the presence of whooping cough in town, and requested to be on their guard, and if any scholar should attempt to attend school while suffering from a cough which seemed like whooping cough to send the child home immediately.

*Typhoid Fever.*—Two cases have been reported : one was sent to Hartford Hospital. The patient is now convalescing. The source of the infection in these cases is not known.

Now a few words in regard to the means which are and those which might be employed to prevent the spread of a contagious disease when a primary case has been recognized.

In the case of small-pox and scarlet fever, where there is a wholesome dread of the disease, it is comparatively easy to prevent the spread. But in the case of measles and whooping cough it is very difficult, because there is a prevailing tendency on the part of the people to regard these diseases as of but little consequence. As a result of the popular misconception largely, over one thousand five hundred and ninety-five cases of measles were reported as occurring in the State during the month of June, 1896, with forty-seven deaths—more deaths during the month of June from measles alone than from scarlet fever, diphtheria, membranous croup and typhoid fever combined.

If parents had any adequate conception of the amount of anxiety and suffering and the number of deaths caused by measles and whooping cough every year, they would not permit one of their children, while suffering from a mild attack of one of these diseases, to go upon the street, much less to attend school or church or to appear at any public gathering.

When a physician or a parent—in case no physician is in attendance, discovers a case of contagious disease, he should feel in duty bound to report it at once to the health officer. Suppose a mild case of scarlet fever is reported as occurring in a thickly peopled tenement house district : the health officer at once visits the family and sees that the patient is isolated in a room stripped of all unnecessary furniture ; the attendant is instructed to disinfect all clothing which has some in contact with the patient by boiling for twenty minutes before they are put into the general washing ; solutions are given for general disinfection of the room and articles of furniture which may have been exposed to a probable contagion.

In most cases of this kind, reported early, the disease will be confined to this one primary case. But if the attending physician or parent neglects to report or isolate this primary case, the probability is that in a short time several cases will be reported in that vicinity ; a general alarm will now be felt and a general epidemic be prevented only by the most stringent measures, and possibly by the closing of one or more schools. A person who

discovers a case of contagious disease in a thickly populated district should be as anxious to report it as he would be a fire in the same region. A conflagration unchecked spreads a little more rapidly, but not more surely, than a contagious disease when unrestrained.

There have been no complaints of offensive garbage heaps this year. Several complaints have arisen from defects in sewage disposal, and from dead animals being left unburied.

The sanitary condition of our larger school-houses may be said to be good. But there is a low, rather small room in the south end of the Pacousett school-house where as many as seventy small children have been confined at one time during the school-hours of the day. The breathing space in this room is wholly inadequate for so many pupils; and the health of the children confined here must inevitably suffer.

We have an excellent public water supply, and we are glad to note that every year many families are discontinuing the use of well and cistern water, and are putting the "city water" into their houses.

In closing this report, a few suggestions which seem to me practical, and some of them very important for the health of the community, should be made. 1. Be sure that every case of contagious disease, however mild, is reported. 2. Let parents see to it that no child of theirs having a contagious disease shall be a source of infection for others if they can prevent it. 3. Let every teacher feel that he is under moral as well as legal obligation to send home any child who presents himself at school while suffering from a contagious disease. 4. Let the attendant upon one sick with a contagious disease see to it that all clothing coming in contact with the patient is disinfected by boiling for twenty minutes before it is put into the general washing; also that all discharges in which the contagion is known to exist are disinfected. Let the sputum of tuberculous patients be collected and burned while it is moist before it dries and floats in the air. 5. Be suspicious of the water from most wells. 6. Study how best to dispose of the sink drainage, so that it will not become a nuisance and a menace to the health of your neighbor or your own family.

As soon as the people are ready to put into practice the few sanitary and hygienic principles already known to be effectual, the remaining contagious diseases, which are now prevalent, will be all but unknown.



PRESTON—DR. O. S. HARRIS, *Health Officer*.

There has been in the past year but little sickness in this town.

*Measles*.—A few cases reported. I have not seen a case.

*Diphtheria*.—A few cases reported and sanitarily managed.

*Typhoid Fever*.—Two cases have been reported, which were isolated and sanitarily treated.

There have been no other contagious diseases reported, and I have known of none.

Malaria has been quite prevalent, more so than ever was known before. I think the origin is the Thames river, which is now mainly used as a sewer by the city of Norwich.

Garbage, mostly cremated.

Sewage in the thickly settled portion piped to river. Water supply, wells and springs, first-class.

School-houses, sanitary condition good.

There have been several complaints made in regard to cess-pools, etc., which were immediately abated upon request.

PROSPECT—JOHN R. PLATT, ESQ., *Health Officer*.

*Measles*.—There has been a number of cases not reported to your health officer.

*Whooping Cough*.—Fifteen or twenty cases—none reported.

There has been no other infectious or contagious diseases in town. Inspection of all the school-buildings has been made. The number of school-houses, four. They have been fumigated with sulphur. The school buildings and out-houses are in good sanitary condition.

There has been three complaints of nuisances, consisting of dead horses. They were abated.

TOWN AND CITY OF PUTNAM—DR. OMER LA RUE, *Health Officer*.

Public health has been in a pretty good condition during the year.

No cases of measles have been reported.

Scarlet fever has been prevalent in June and July. The first case appeared in May. We cannot trace the cause of this only to a letter received by the family from relatives, living in another town, who had lost a boy by that disease. In June we had five



or six cases in different parts of the city. In July we had about twenty cases. The disease disappeared in the last days of August.

We have had but a few cases of diphtheria, and these generally of a mild type, except those which accompanied the cases of scarlet fever in June and July.

We lost several children from membranous croup.

We have had a few cases of whooping cough in September, October and November. None have been reported in the last months.

We have had cases of typhoid fever in September, October and November, 1895, and in May, July and August, 1896. Two cases reported in August as typhoid fever died with all the symptoms of cerebro-spinal fever.

July and August have proved fatal to our young ones. Many died of cholera infantum, diarrhœa and dysentery.

The water has been lower this year than any year previous. It is probably to this fact that we may attribute the cases of malarial fever which we had in August. For the first time to my knowledge, after twenty-five years of practice of medicine, we have had here in the last month, with people who never moved from Putnam, several cases of true fever and ague with regular periodical chills followed by a high fever and profuse sweating.

The most complaints in the last three months of the year 1895 and the first three months of 1896 have been for diseases of the larynx and lungs.

Garbage here is thrown into the river or buried in the ground.

Common cesspools and wells turned into cesspools [a very dangerous practice.—C. A. L., Sec.] is the only system of sewerage which we have yet, except the Putnam Cotton Manufacturing Company and a part of Nightingale Mills, which have private system of sewers.

Our school-houses are all in a good sanitary condition. So are all our public buildings, except our lockup, which is in the basement of a large brick building. It is damp and rarely cleaned as it ought to be.

We have a good system of water-works, but as our water supply comes from our river, which runs for a very long distance on low lands, when water is low, as it has been this year, during and after the severe heat of August, the water has a swampy odor and tastes the same.

There has been no public work of sanitary influence undertaken during this year.

The health officer has had many complaints about overfull cess-pools and privies, garbage in private yards, and the nuisance of pig sties.

All these have been attended to as well as possible.

REDDING—DR. ERNEST H. SMITH, *Health Officer*.

The following cases of contagious diseases have been reported during the past year :

A mild epidemic of measles occurred in the spring on the east side of the town. The cases were mostly so mild in character that no report was made : in fact, in most cases no physician was called.

Scarlet fever has occurred in four families, and in each case was confined to the family where it originated. Quarantine was maintained and final disinfection carried out by the health officer.

Diphtheria has occurred in three families, and in each case has been kept confined to family where it first originated.

There have been no cases of any other contagious diseases.

In accordance with the advice of the State Board of Health the school-houses throughout the town have been disinfected with sulphur and the closets have been cleaned and disinfected. In one district an old and dilapidated closet has been replaced by a new one. In general, then, the sanitary condition of the school-houses may be said to be excellent.

There has been but one complaint of a nuisance, and that nuisance was abated.

In general it may be said that the town each year takes more interest in sanitary matters and in the public health, and is more ready to keep up to the times in these respects.

P. S.—There is nothing in particular to say in regard to the other topics suggested by the Secretary. No public provision is made with regard to garbage or sewage, and no precautions taken in regard to water and milk supply. Probably in a town where people are so widely scattered such provisions are not necessary. A public place for the care of contagious diseases would undoubtedly be of great benefit in preventing the spread of a contagious disease through a family, but we are not educated up to that yet. As it is now, a case of scarlet fever, for example, generally will spread through a family until all or nearly all the children have had it. The most we can do usually is to try and keep it confined to that family, and this we generally succeed in doing.

RIDGEFIELD—DR. W. E. WEED, *Health Officer*.

In accordance with the statute, I herewith present my third annual report as town health officer.

There have been reported to me during the year :

*Measles*.—196 cases.

*Scarlet Fever*.—4 cases.

*Typhoid Fever*.—3 cases.

The town has had an extensive epidemic of measles, beginning in January and continuing until August, the greatest number of cases being in the Center and Titicus school districts, there being but very few cases outside of those districts.

The schools in these districts were closed that the spread of the disease might be checked.

In the great majority of cases the disease was not of a very severe type ; but in a number of instances the disease was very severe, and in quite a large number of cases there were serious complications following.

There has been but three cases of typhoid fever in the town during the year, occurring at separate periods, and in different sections of the town.

There was less scarlet fever reported than during the previous year, there being only four cases, occurring in three families, and in no instance was the disease communicated beyond the house in which it originated.

There is no systematic method of garbage disposal, yet there has been but two complaints to me relating to an accumulation of garbage becoming a nuisance. In this matter there has been an improvement over former years.

The school-houses of the several districts are all in good sanitary condition.

The water supply is from wells and springs, and is uniformly good at all times of the year.

ROCKY HILL—DR. FRANK L. BURR, *Health Officer*.

Since March, 1896, we have had an epidemic of measles. Thirty cases have been reported, all of a mild type. Quarantine regulations were strictly enforced. No deaths occurred.

*Scarlet Fever*.—Nine cases. The primary case was imported from Middletown, Conn. Two cases, infection from primary, all in one family. Other cases origin unknown.

*Diphtheria*.—One case. Isolation was practiced.

*Typhoid Fever*.—One case. Origin could not be traced.

*Methods of Garbage Disposal*.—No system.

*Sewage Disposal*.—Surface drainage.

School-houses in good sanitary condition, ventilation fair. Sanitary condition of other public buildings excellent.

*Water Supply*.—Wells and springs.

ROXBURY—DR. LOUIS J. PONS, *Health Officer*.

I hereby submit the following report in connection with this office for the year ending Sept. 1, 1896.

*Measles*.—None occurred until January, 1896, when a young girl returned from a visit to friends in New York state. She attended school for a few days, and was ill several days before I received notice that the child had measles. Previous to this several playmates had visited her. I immediately sent a written notice to the father to keep out all visitors, the members of the family to stay at home and to use all precaution to keep the disease from spreading. The sick child and her smaller sister were forbidden to attend school until permitted by me. A few days after, when the second case occurred, I closed the district school, but this proved of no avail, as the first case had apparently infected a large number of the scholars. The disease spread rapidly, until from January to September there occurred 178 cases, about 90 per cent. of which were in the west half of the town, containing about 500 inhabitants, the entire population of the town being about 900.

Fifty per cent. of the cases were very severe, patients being ill from two to four weeks, complications frequent, especially pneumonia, but no deaths resulted.

*Scarlet Fever*.—Three cases in March and one in April, all in one family, and very mild. Origin unknown. Quarantine enforced, fumigation and disinfection ordered.

*Membranous Croup*.—One case in February, fatal; one case in May, recovered.

*Typhoid Fever*.—Four cases. Origin of the first and second cases unknown. The last two occurred in houses only a few rods apart, one of which had a severe case two years ago. The cases occurring in these houses were probably due to a contaminated water supply. I have not deemed it necessary to quarantine or placard premises for typhoid fever, but am particular about



instructing nurses and others regarding the disinfection of all discharges, cautioning them about using impure water and other sources of typhoid or other contamination. No deaths from typhoid fever during the year.

Other rarer infectious or contagious diseases have not occurred.

Garbage and sewage disposal remains much the same as during the past 50 years.

The sanitary condition of our school-houses has been considerably improved during the past two years. Some other public buildings have also been remodeled and improved.

The water supply is good, mostly from wells, although spring water is being substituted in many instances.

No public work connected with sanitation has been done during the year.

SALEM—DR. CHARLES F. CONGDON, *Health Officer*.

This report must of necessity be a negative one.

There has not been a case of contagious disease of any kind reported to me or come to my knowledge during the year.

Garbage is generally disposed of in the family pig pen and the results are satisfactory.

There are no sewers in the town.

The sanitary condition of the school-houses is as good as usual in country towns. In some cases the out-buildings need attention. The sanitary condition of the other public buildings is good.

The water supply comes from brooks, springs and wells, and is generally good.

No complaint has been made to me during the year, and I have seen no cause to officially interfere in any case. I have been to no expense except for postage, and I have no charge for services.

SALISBURY—DR. W. B. BISSELL, *Health Officer*.

From my appointment (Feb. 21st, 1896) to date, there have been nine cases of measles, one of scarlet fever, two of whooping cough, and three of typhoid fever. The measles cases originated primarily from an out of town source. The scarlet fever case could not be traced. The whooping cough was brought from a neighboring town by an adult. Of the typhoid fever cases, one came from out of town; the other two, occurring as sporadic cases in different parts of the town, have not been traced.



These cases have all been isolated so far as possible, and disinfected when required.

The sanitary condition of district school privy vaults throughout the entire town is very poor. These vaults have been ordered cleansed and disinfected. The privy vaults of public buildings (depot, etc.) are all in good condition.

Nothing has been done during the year in regard to sewer construction, of which there is great need, especially in the villages of Lakeville and Salisbury, where there are public water supplies and consequently a great deal of surface drainage.

With a view to limiting, in a small way, the spread of such diseases as are carried by means of sputa, I have had printed and posted in all public buildings placards, which read, viz. "Spitting on the floors of public buildings is a nuisance, is frequently a means of communicating disease, and is hereby forbidden."

There have been two complaints of nuisances, which were soon remedied.

SAYBROOK (DEEP RIVER)—DR. E. BIDWELL, *Health Officer*.

A number of nuisances have been reported to me which were abated.

I have endeavored to keep a general outlook of the sanitary condition of the village.

During the spring and early summer months there was an epidemic of measles. I think there were from 100 to 150 cases; only two fatal cases.

Otherwise the past year has been one of general health.

SCOTLAND—DR. D. L. ROSS, *Health Officer*.

One family was exposed to diphtheria, but I quarantined them for two weeks, and think by that means I kept it out of the town. Whooping cough: we had quite a number of cases, fifty or more—the peculiarity was that so many old people over 70 and 80 years came down with it. That was the extent of the contagious cases.

We have no sewage.

The schools have been consolidated and they are now erecting a new school building with town hall and library on second floor.

The water supply is from wells.

The public green has been improved and sidewalks made.

SEYMOUR—DR. FRANK A. BENEDICT, *Health Officer*.

During the year very few infectious or contagious diseases have occurred, and the general health of the town has been very good.

*Measles*.—The epidemic which has prevailed so extensively throughout the State has been very mild here. Only eighteen cases have been reported, and although there were some cases which were not reported, these cases were comparatively few. Most of the cases showed only a very mild form of the disease, and in several cases it occurred in persons who had previously had the disease.

The only precaution used were to post the house and keep the other children of the family out of school. Strict quarantine and fumigation was not employed.

*Scarlet Fever*.—Only three cases have occurred, and these were all in one family. In this case it was impossible to find any cause for the outbreak. The house was posted and quarantined and fumigated. No secondary cases occurred.

*Typhoid Fever*.—Only one case has been reported, and this was a fish and oyster peddler whose business called him into other towns where the disease was prevalent.

The sanitary condition of the school-houses is good.

There is no public water supply.

SHARON—DR. BYRON W. MUNSON, *Health Officer*.

The following were the only members of the group of contagious diseases which have occurred in this town during the year just passed: Measles, scarlet fever and whooping cough.

The scarlet fever cases happened first in point of time, and in a circumscribed area—a school district known as “White’s Hollow District No. 7.” The majority of the residents of this district are farmer families—dairy farmers. Milk is delivered from the farms to the Condensed Milk Factory in Wassaic, New York; to Coleman’s Station upon the line of the Harlem Railroad; to the Lime Rock station upon the Housatonic Railroad, and many private journeys are made to the village of Lakeville, some three or four miles distant.

The first case of scarlet fever happened in the family of Mrs. John Wyke, whose sons deliver milk to the Borden factory at Wassaic, in the person of the youngest son, Benjamin, who attended the school No. 7.

January 31st, 1896, was the last school day for this boy before the discovery of the disease, which was reported to me February 3d. The usual quarantine regulations were promptly issued, the Borden Factory notified, and the sick boy isolated.

The type of the disease was scarlatina simplex; desquamation was slow, and the child remained away from school for five weeks, when, the attending physician having certified that all evidence of the disease had disappeared, he was allowed to return.

On March 31st I was notified of a second case of the disease, near the school-house, in district No. 7; my visit for quarantine purposes was made the next forenoon, and before leaving the vicinity it was learned that still another case existed.

A few days later a third case occurred; the two last named were members of the district committeeman's family, and lived very near the school-house.

Vacation time being close at hand, it was agreed to keep the school-house closed two weeks longer than the vacation, and meantime fumigate and scrub the school-room.

First, the room was fumigated with sulphur, then all wood-work was scrubbed with hot antiseptic solution; afterwards the paper was scraped from the walls, and the walls were white-washed.

There was no further manifestation of this disease upon re-opening the school.

The cases were all of the simple type, with no death.

Measles were epidemic during the latter part of March, in April and May; 27 cases were reported to me or came under observation. There were rumors of other cases of scarlet fever—rumors only—and doubtless other cases of measles. There were no deaths, and many cases did not have the attention of a physician.

I have reason to believe that measles imported from just over the state line, by some children attending a church party in the village, was the cause of the outbreak in the village; a majority of the cases happened in Episcopal families, and the fair or sociable was given by the Episcopal people. The children of the Sunday-school were trained for the occasion, and the night of the "fair" one of the children had prodromes so severely that he could hardly carry out his portion of the programme. The eruption showed in the throat next morning.

The cases of whooping cough were two; imported from New

York City for the "fresh air cure." They were quarantined, and no extension of the disease happened.

Garbage in the village of Sharon is usually thrown into the stable manure heap, or fed to swine.

Sewage is into cesspools, and the result is sometimes not nice. An effort was made a year ago and again last spring to introduce a system of sewers to carry away from the village all sewage and night-soil.

Failure to get the system was due to opposition from "old-timers," to whom the *privy* and the "Little Old Red School-house" meet every need in their peculiar line.

The sanitary condition of the school-houses in Sharon is from fair to good, although the regular order is the little frame building of a single room and an "entry." Some of the schools are equipped with modern furniture—hard-wood desks and seats, more or less adjustable to the size of the pupil; others have pine desks and seats in a more ancient style, while a few have a single desk running about three sides of the room with board seat fronting it. The children sit with their backs to the hollow square, in the center of which stands the stove, while at the lower end is the school-marm's desk, or table.

The light from the windows strike the pupils squarely in the face, producing considerable eye-strain.

The Town Hall and the Hotchkiss Library are the only other public buildings; the Hotchkiss Library is a new structure, built of stone, and finished in hard woods; its condition is good.

The Town Hall—containing the lock-up, town vault and town clerk's office, selectmen's room, post-office, and a large auditorium, which had reached such a pitch of unsanitariness as to be condemned by the town health officer, which action was approved by the county health officer—is undergoing repairs. It is expected the repairs will be finished in the near future.

The following letter will explain the status somewhat:—

TOWN HEALTH OFFICER'S OFFICE, SHARON, May 4th, 1896.

*To the Honorable Board of Selectmen for the Town of Sharon :*

*Whereas*, during the summer of 1895, the urinal and privy-vault maintained at the Town Hall in said Sharon was declared a nuisance and dangerous to public health by the town health officer, and the said action was affirmed by Wm. F. Hurlbut, Esq., Health Officer for the County of Litchfield, and, at the annual town meeting in October of 1895 the electors of the said town of Sharon voted that such action as the town health officer and the selectmen should agree upon should be



taken in the premises ; and, while advisory action has been had with the said town health officer, no action by the selectmen has been taken looking to a permanent cure of the evil, and the same continues a menace to public health ; it is ordered :

The said selectmen of town of Sharon are directed to cause the vault of said privy to be properly cleaned out forthwith ; and to close said privy-closet against all persons for any purpose other than a urinating place, and to abolish the closet for use as a place of defœcation, without further delay.

A copy of this order will go forward to the county health officer this day, that such further action may be had as he may judge expedient.

I am, gentlemen, very respectfully your obedient servant,

BYRON W. MUNSON, M.D.,

*Town Health Officer.*

The "Town Agent" being absent at the time, the other members of the Board of Selectmen asked for a stay of action by the health officer until the said "Town Agent" should return from his business trip. This was granted so far as to allow the seats in the privy to be nailed fast, making their use impracticable.

The radical cure of the condition was not undertaken until late in the summer, when the whole of the Town Hall building was taken in hand for repairs and alterations.

The town lock-up, when finished, will be not only strong but sanitary ; and the basement or cellar of the building will be something better than a cesspool, which it was before the alterations.

The further sanitary improvement of the village was in turning the sewage of the Sharon Inn from a small water-course into the garden belonging to the "inn."

The greatest sanitary improvement the village of Sharon could have would be a sewer system to carry away and safely dispose of the village sewage.

Sharon village, and a large portion of the town as well, is a summer resort, and a major portion of the income is derived from the summer people ; the summer people wish for sanitary conveniences equal to other summer resorts, but are met by the inhabitants pleading that there is not money enough in it at present to pay for the primary outlay.

A few of the villagers are in favor of sewerage the refuse to a safe place, and will continue to work for such, and it is hoped will be ultimately successful.

There are but two milk venders doing business in the village ; both are intelligent and keep their herds and milk in good order.



SHERMAN—DR. JOHN N. WOODRUFF, *Health Officer*.

It has been a year of general good health. The sanitary condition of the town has been good. We have not been subject to any contagious diseases to any great extent.

In the spring we had four cases of measles, all of which recovered.

There has been one case of diphtheria reported, which resulted favorably, the origin of which it was impossible to discover.

The excessive death-rate which we have been subject to cannot be attributed to any special disease, and I do not know of any cause for it.

The disposal of our garbage is of the simplest kind.

*Sewage*.—Surface, cesspools and sinks.

The school-houses and buildings pertaining thereto, and the town hall (which is the only public building we have) are kept in a good hygienic condition.

Our water supply is from wells and springs which are very good and pure.

SIMSBURY—DR. C. M. WOOSTER, *Health Officer*.

During the year of 1895-6 the town of Simsbury has been particularly exempt from all of the most serious of contagious diseases with the exception of measles and whooping cough.

An epidemic of whooping cough appeared in January and disappeared in March with a total of twenty cases. Measles appeared in the latter part of March and disappeared in June with a total of thirty-seven cases.

One suspected case of diphtheria was reported at Bushy Hill, but on microscopic test proved to be spurious.

The sanitary condition of our school buildings remains the same, and regarding ventilation most of them are very poor, and when our school districts consolidate and erect a good school building it will be for the physical as well as mental benefit of the scholars.

SOMERS—DR. A. L. HURD, *Health Officer*.

My duties as health officer of the town of Somers from September 1st, 1895, to September 1st, 1896, close with the report of my doings. The duty of the health officer is to recommend the best methods to prevent contracting disease and adopting measures to control the spread of epidemics.

The town has not been visited by an epidemic during the past year. There have been no cases of diphtheria, small-pox, scarlet fever, or measles. Two cases of typhoid fever made their appearance, the first in April and the second in August. The former came from Springfield, the latter was brought to us from Boston. No cases developed in Somers. The town has enjoyed a comparatively healthy year. Acute disease has not visited us to any great extent. The death-rate has been lower than in years past. There are two things needed to make our two villages, Somers street and Somersville, more healthy : that is, a good supply of water, of which neither can boast. In both villages the water for family use is drawn from wells. Many of them were dug over a hundred years ago, and have acted as cesspools for the surrounding yards ever since. If you hunt the State of Connecticut over, you can find no place that can get good water at a less cost than we can. Why not invest a few dollars in thus improving our villages, and thereby prevent disease and prolong our lives ?

The second source of disease, and one which the town should take steps to remedy, is the town hall. I suppose we shall have to call it a town hall in this report, for it has been known as such in generations past. Our imagination is hardly vivid enough to give to such a room the name of town hall. Located in the church basement, low ceilings, floor on the ground, a furnace on either side, no means of ventilation, and what have we ? Something that we, as citizens of the town of Somers, ought to be ashamed of. During the past four years I have watched this room. I have found that seventy-five per cent. of the acute sickness of our people is traceable to a cold contracted at a meeting or entertainment held in the town hall. An increase of their taxes by only a few mills on the dollar would give Somers a town hall, a building very much needed. By so doing they will in a measure control the sickness and suffering of her people.

SOUTHBURY—MR. WILLIAM H. WAKELEE, *Health Officer*.

Five complaints of existing nuisances have been made during the year, and upon notice were quickly abated, and suggestions made readily followed.

One complaint was made about a stagnant pond near the South Britain village ; upon investigation the complaint was found to

be well founded. Live water was put into the pond, coming from the Pomperang River, by the selectmen by my order, under Chapter clxii, Public Act 1895. The inhabitants had been in the habit of cutting ice on said pond ; and where it was used for any purpose except cold storage in public places, they were notified not to use the ice, and the orders were at once complied with, and I might say all orders from me as health officer have been complied with promptly, and kindly received.

*Measles*.—Sixty-nine cases reported to me, and there were many other cases cared for by their families and never reported. The measles were brought to this town by children attending school in Woodbury and Roxbury, where the measles were raging. It was impossible to quarantine the cases successfully, for many times the parents would take their children to the neighbors so they might contract the disease while they are young ; and you could not make them believe it a dangerous disease, and they might contract the disease again. Most cases the disease was in a mild form.

*Scarlet Fever*.—One case contracted from case in Naugatuck ; mild case ; no secondary case ; quarantined and house fumigated.

*Typhoid Fever*.—One case reported ; I at once investigated, and in company with Dr. L. J. Pons of Roxbury, the attending physician, made a careful inspection of the premises ; I found the well in bad shape, the drainage from the house running into it. The trouble was removed and the rules applying to typhoid fever cases rigidly enforced. No secondary case.

Circular No. 73 was personally delivered to all storekeepers in town.

According to advice of Circular No. 77, all the school-houses in town were fumigated with sulphur fumes in the latter part of August.

No other case of contagious or infectious disease has been reported.

The doctor in town complies with the law in reporting contagious diseases.

One case of diseased eyes of an infant was reported, and selectmen, upon notice from me, furnished medical attendance.

CITY OF SO. NORWALK—DR. J. MILTON COBURN, *Health Officer*.

During the year ending Aug. 31, 1896, there have been reported to me one hundred and twenty-four cases of contagious and infectious diseases, divided as follows: measles, one hundred; scarlet fever, four; diphtheria, twenty. Of these death claimed as its victims a total of twelve, being ten per cent. of the mortality of the city.

In January an epidemic of measles broke out, the first dozen cases of which were strictly quarantined, but as it became evident that an epidemic was inevitable, the houses were placarded. Only in all about one hundred cases were reported. This would probably represent about one-half the cases that actually occurred, some of the physicians refusing to report, presumably from a lack of interest or a selfish desire to make themselves solid with their patients. A more liberal education of the people and a more healthful regard for the law is much desired. To those honorable men who did their duty regardless of criticism we return a large measure of respect and appreciation. "There is no emotion of the soul so sweet as that which comes from doing right." While only five deaths were reported as a direct result of measles, there were many from pneumonia following.

In opposition to the opinion of some physicians that measles are a good thing to have (when young), the observations of the writer would go to prove "that having them when young" is no guarantee that you will not have them when you are old, and to have them at any time *may* prove fatal, and if not *will* make one more susceptible to other diseases that *have* proved themselves *not good* to have at all.

In February and March eighteen cases of diphtheria were reported, eight of which terminated fatally. In every case strict quarantine was observed, and in three uncontrollable cases a watchman was kept on guard night and day. No public funerals were permitted, only the clergyman and undertaker being allowed ingress to the premises. Every house was thoroughly disinfected by fumigation and washing. Owing to the exposure of some of the school-children, the Franklyn and Concord Street schools were closed and the buildings fumigated. After a period of three weeks, no new cases arising, they were permitted to reopen, with the instruction to the principal to send home any child complaining of throat symptoms and not allow of their return



without a written order from the health officer. By these means what threatened to be a serious epidemic was aborted.

The sanitary improvements have been marked and well-directed. Three plague spots, for many years the source of disease, have been removed by drainage and filling under the advice of Dr. Lindsley.

Sanitary plumbing rules have been adopted and a sanitary plumber appointed, all work being subject to his inspection and approval. A sanitary inspector has been appointed whose duty it shall be to canvass the city and investigate all complaints and report all nuisances. Twenty-five out-houses have been removed and the premises connected with the sewer. Three houses have been condemned as unfit for habitation. An ordinance has been passed relative to the reporting of disease caused by the milk or water supply, and a record of such cases ordered. Also requiring the registry of each milkman, and data relative to his business. Providing for the testing of milk for adulterations. Reporting of cases of remittent fever, cholera infantum and tuberculosis. The appointment of a city health officer, and the causing to be laid street and special sewers for local drainage. Great good has been accomplished by the filling in by the Railroad Co. of the old Danbury dock and Chestnut street pest-holes, for many years prolific breeders of disease.

The public care of contagious disease has as yet received but little consideration. The building of a new general hospital in the near future, it is hoped, will provide an annex for such cases. We very much regret that in the last year some of our wealthy citizens should have died forgetting the monument they might in this way have raised to their own glory and humanity's sake.

The garbage question is of great importance to our citizens and should be practically solved before another summer, more complaints having arisen from this source than all others combined. The present custom of every man taking care of his own does not protect the man whose neighbor is not so cleanly as himself. We would recommend a regular collection at least twice a week, as practiced in our larger cities (believing that cleanliness is next to godliness, at least so far as our health is concerned).

An investigation of our school buildings brings to light many wrongs that should be righted.

The Kundeen building, leased by the city, is in every way unsuitable for school purposes. Illy constructed, without venti-



lation or sanitary arrangements and a regular fire trap, it should be condemned.

At the Franklyn Street school the two most striking evils are its overcrowded condition and poor ventilation, the two combining as a menace to the lives of the pupils. In no instance is a room properly ventilated, and each room has at least twice its sanitary quota of children—one room containing 82 and six over 50 each. An overhauling of the system of ventilation should be begun at once.

At the Concord Street school more room is needed as a playground, 500 children being crowded into one small yard or turned into the street. An exhaust system should be added to its ventilating shafts, the closets remodeled, and other rooms provided for the higher grades.

It is earnestly hoped that parents will take interest enough in their children to see to it that in the near future two new sanitary school buildings shall be erected. Economy in this line is worse folly than a fifty-three-cent dollar.

#### SOUTH WINDSOR—DR. C. L. BLAKESLEE, *Health Officer*.

There has been less sickness of the kinds which usually occur with each season. For instance, there was little of bronchitis and pneumonia during the cold weather, and but little dysentery and kindred diseases during the heated term.

There was an epidemic of measles during the spring which was more than usually severe, doubtless due in great measure to the changeable weather of the season and to the usual depressing effect of spring weather.

But few, if any, deaths were due to the disease itself, but in almost every instance was due to the sequellæ, such as bronchitis and pneumonia.

Physicians treating contagious or infectious diseases in the town have been quite prompt in giving notice of their occurrence. There have been some cases of typhoid fever, but most have been of a mild type, and but few deaths have resulted. There has in no instance been two cases of the disease in one family, which shows that care was taken by physicians and attendants to prevent both contagion and infection. Disinfectants were doubtless thoroughly as well as effectually applied, as there has been no secondary cases resulting from any cases occurring in this town, at least none have come to my knowledge.

There has been an unusual amount of la grippe during the summer, being sufficiently severe to be termed an epidemic. Heretofore epidemics of this dreaded and most distressing disease have occurred during the winter months.

Malaria has again made its appearance, both in its acute and chronic form, having been observed but very little for three years, having been replaced by la grippe.

SPRAGUE—DR. T. I. STANTON, *Health Officer*.

*Measles*.—We had a few cases in July of a mild type. They were confined to one family. They were contracted by the oldest boy of the family sorting rags in the Eastern Straw Board Co.'s paper mill.

*Scarlet Fever*.—Six cases were all that came to my knowledge. There were unofficial reports of others, and no deaths reported. They were all of a mild type. On request of the health officer the families quarantined themselves. Disinfectants were used. The houses were not fumigated and the disease did not spread. The origin could not be traced, and the cases were in May and June.

*Whooping Cough*.—We had a few cases, not very severe, during the winter and spring. No restrictions were required of the patients. Some of them were on the streets on pleasant days. But the disease did not spread to any great extent.

*Typhoid Fever*.—I cannot remember the number of cases, but there were a few late last fall. No deaths.

There is no public collecting of garbage, and the sewage disposal is by Beaver Brook and privy vaults.

The sanitary condition of our school-houses and public buildings is first-class. The water supply is from wells. There has been no need of any sanitary improvement.

STAFFORD AND BOROUGH OF STAFFORD SPRINGS—DR. FRANK L. SMITH, *Health Officer*.

*Measles*.—There have been four cases of this disease reported during the past year, one occurring in the town and three in the borough, all of which were of a mild type.

*Scarlet Fever*.—Four cases of this disease have been reported during the year, two of these occurring at Stafford Hollow and two at the Springs; the two former were of a very mild type, the latter quite severe. Most careful and diligent inquiry was

made as to the origin of these cases, but no clue whatever was obtained.

*Diphtheria*.—Of this disease there have been reported twelve cases, nine occurring in the borough, two at West Stafford and one at "Forrestville." Of these cases nine have been reported as diphtheria, two as diphtheritic croup and one as diphtheritic tonsillitis; four deaths have occurred among the twelve cases.

*Typhoid Fever*.—But two cases of this disease have been reported during the past year, which is in marked contrast to the year preceding, when twenty-one cases were returned. No doubt one reason for the less frequent appearance of the disease is to be found in our public water supply.

TOWN OF STAMFORD—DR. F. J. ROGERS, *Health Officer*.

As ordered by statute, this report is respectfully submitted in order that the citizens may understand better the sanitary condition of the town outside the city limits.

Whooping cough has been prevalent in some sections of the town, but generally in a mild form. The number of cases of measles reported shows that it has been epidemic here, as in all parts of the State. One case of typhoid fever was reported to the office.

The primitive method of disposing of garbage and sewage still practiced in the town, may have something to do with the high mortality or excessive death-rate, but as this mortality does not exist proportionally between the number of inhabitants in the city and town and the death-rate of the city and town, that fact may cut no figure.

The public buildings, including the school-houses, have been cared for in a sanitary manner by the proper officials. The condition of the town, taken in a general manner, has been very good, and few complaints have reached this office.

No action has been taken in regard to the inspection of our milk supply, except in one case which was reported as suspicious. On examination, the herd complained of was examined by a veterinary, the buildings and water supply inspected, and everything found in a scrupulously clean, sweet and orderly condition.

Number of cases of measles reported, nineteen.

Number of cases of whooping cough, six.

Number of cases of typhoid fever, one.

Complaints of nuisances, nine.

STERLING—MR. ORREN W. BATES, *Health Officer*.

In our town it is a satisfaction to report that the duties of a health officer are becoming each year less unpleasant and the results more satisfactory, from the fact that the people, recognizing the benefits of systematic attention and becoming more familiar with the requirements of the statute law, manifest an eagerness to avail themselves of all the safeguards that can be employed to check the spread of infectious diseases and to lessen the effects of individual cases which occur in their homes. At first it seemed to be almost impossible to force anyone to report a case of contagious disease.

The physicians now, with rare exceptions, manifest a willingness to coöperate with the health officer by promptly reporting cases.

Scarlet fever has been more than usually prevalent. Twenty-one cases were reported. In one instance we were able to trace its origin to the neighboring town of Plainfield. In another instance a family, which had recently been afflicted with the disease, moved from Killingly into our town and communicated it to nearly an entire family. The origin of other primary cases we have been unable to trace, but have succeeded in checking the spread of the disease. Of measles seventeen cases have been reported, all of a mild nature. In instances of these diseases we have established a quarantine, disinfected house and clothing with carbolic acid or sulpho-naphthol, caused the soiled linen and putrid discharges to be covered with milk of lime or corrosive sublimate, and after convalescence fumigated the house with sulphur candles. Eight cases of diphtheria were reported. Nearly all of these cases were in two adjacent families. We were unable to trace the cause to a legal certainty, but have reason to believe that the source was an unreported case. Membranous croup, one case only, and that was fatal. Of typhoid fever two cases occurred.

Our seven school-houses have been cleansed and fumigated in accordance with the requirement of the State Board of Health. We think we are justified in reporting that the general results (locally) of our new health system are more satisfactory each year, and that with faithful work on the part of the health officer and a ready response and coöperation from the public, the system will grow in favor and soon be recognized as a public blessing and a public necessity.



STONINGTON—DR. O. M. BARBER, *Health Officer*.

*Measles*.—During the year a few cases of measles have been reported. All of a mild type.

*Scarlet Fever*.—In September a fatal case of scarlet fever occurred in Pawtucket which was not reported. This was followed by five secondary cases, which were reported and precautions taken that prevented any further spread of the disease. Two other cases have been imported, but with no secondary cases following.

*Diphtheria*.—During December diphtheria prevailed in one of the Pawtucket school districts. Seven pupils were taken sick at the same time. Five secondary cases were reported, two of which were fatal. The school-house was then cleansed and disinfected. No other cases have been reported.

*Privy Vaults*.—The privy vaults of the railroad stations have been put in better sanitary condition since they were inspected last autumn.

*Nuisances*.—Six nuisances have been reported, and most of them abated.

STRATFORD—DR. G. F. LEWIS, *Health Officer*.

Contagious diseases have been more prevalent in Stratford during the past year than formerly.

Measles, which was epidemic a few years ago, has again been quite prevalent during the summer.

Scarlet fever, while not epidemic, has occurred from time to time; mostly single cases. By prompt isolation and disinfection there has been no spread of this disease.

Diphtheria gained quite a hold in one portion of the town last fall, and was with difficulty stamped out, as the houses where it occurred were thoroughly infected before it was discovered. It was finally found necessary to move some of the families into tents, and thoroughly disinfect the houses before allowing the inmates to return; also keeping the patients in tents until they had recovered from the disease. This effectually stamped out the disease. There were in all about twenty cases with three deaths.

Only one case of typhoid fever was reported during the year.

The origin of the first cases of contagious diseases, which have occurred during the year, I am unable to trace. They were prob-



ably brought from the adjoining towns, where they were more or less prevalent.

Out of 57 deaths 18, or nearly one-third, were above 70 years of age. Also 15 were under one year of age.

In the treatment of diphtheria last fall the town provided tents, which was a very satisfactory way of isolating the patients and preventing the spread of the disease.

The sanitary condition of the school-houses is excellent. They have been thoroughly cleaned and painted when necessary.

The sanitary condition of the other public buildings is good.

The filling in of the pond-hole near the residence of William Strong will be of great benefit to the public health. It has created more than usual interest, as it is the first application of the new law passed by the legislature for the removal of nuisances created by natural causes.

SUFFIELD—DR. J. K. MASON, *Health Officer*.

In conformity with the statute, I have the honor to make, as health officer, the following report for the year ending August 31st, 1896 :

Whole number of deaths during the year, 51—which makes the death-rate 16.2. Of these deaths but three were from contagious diseases—one-seventeenth of the whole number. These rates, being much below the average of the last five years, testify of themselves to the healthfulness of the year and the absence of any very destructive epidemic.

*Measles*.—During the months of April, May and June last, quite a number of cases occurred in town—all but two being early recognized and promptly reported.

The first occurred at the Institution, and was reported March 25th. The patient, a young lady from Simsbury, was immediately isolated and practically quarantined—a nurse being provided, and no communication with teachers or students allowed. As soon as convalescent, her father was notified, and she was taken home by private conveyance. The room, having been thoroughly cleansed and fumigated, was unoccupied and closed for seven weeks thereafter; at the expiration of which time she was permitted to reoccupy it. No other case occurred at the Institution.

During the following month of April, the disease appeared in four families, miles apart, and having had no communication with

the Institution or each other. The patients, with one exception, were school children, and the infection was believed to have come from Hartford, from recent exposures there, where the disease was very prevalent. All were suspended from school, together with their brothers and sisters, and the disease was not communicated outside of their respective families, except in a single instance—all communication with the outside world having been interdicted. In the exceptional case the disease was not suspected for several days, and the patient kept up her attendance at school. Finally, what was supposed to be "only a cold" proved to be a case of measles, and two of her schoolmates had become infected. In this way, ten days later, the disease gained a new foothold in that district; and, about this time, a little boy was sent up from Hartford to his grandparents here, to get him out of an infected neighborhood in the city. Shortly after, he, too, came down with the disease, in another district, but not till he had unwittingly given it to his nearest neighbors, and also to two other families—through the Sabbath school, from one day's attendance. Thus the disease now reached its high-water mark in town. But, by taking all these cases and their accompaniments out of school and isolating them as far as practicable, we soon arrested it in this part of the town.

Later on, a case was developed in West Suffield, the source of infection not being known or discoverable, and before recognized was communicated to two other families through the school. Beyond these it did not spread, and we thus come to the end of the epidemic. Not a death occurred in these more than forty cases, and not a school was closed or materially affected.

In this account we have aimed to include every outbreak of the disease visited or reported. A few isolated cases may have occurred here and there; some not attended by any physician and not reported.

In summing up, we observe that this report shows the impossibility of shutting out disease so infectious as measles when prevalent in neighboring cities and towns. It also shows the practicability of confining it within narrow limits, protecting schools, and curtailing its duration and fatality.

*Scarlet Fever.*—Only two cases reported during the year: one in the Northeast District last November, source of infection not known; and one in the Southeast District, in December, coming from Windsor Locks, where the patient had been seriously

exposed. Both were isolated in upper chambers, with single attendants, and both made good recoveries without spreading the disease.

*Diphtheria*.—One suspected case reported in October last ; but upon the subsequent fatal issue and post mortem examination, pulmonary consumption, with much pharyngeal inflammation, was found to have been the cause of death.

*Whooping Cough*.—This disease has not been reported by any physician. It was, however, quite prevalent during the fall and winter, with three deaths of infants, constituting the total mortality from contagious diseases during the year.

*Typhoid Fever*.—Only two cases reported, and no communication of the disease to other members of the family, isolation and every other precaution being taken, and the disinfection and burial of discharges.

Under the head of sanitary inspection we have to report about the usual number of complaints made in regard to foul wells, cesspools, sink drains, water closets, unburied dead animals, etc. When such complaints upon investigation have been found to be well founded, orders for the abatement of such nuisances have always been given, and in every instance complied with. In a few cases, complaints have been made, as I judged, without reason, or from improper motives.

*Public Buildings and School-Houses*.—These have all been inspected during the year, and found in good condition—with one or two exceptions. Several of our school-houses have been rebuilt in whole or in part recently, and others repaired and remodeled, so that with the exceptions alluded to they present a very creditable appearance inside and out. Acting under the advice and instructions of the State Board of Health, these school-houses have all been thoroughly cleansed, and fumigated with sulphur, the past vacation, thirty-five pounds of sulphur candles having been used.

The Center school-house, West Suffield, was not fumigated, as it was undergoing very extensive repairs and did not seem to need it.

*Public Water Supply*.—In regard to this I am happy to be able to report great and satisfactory progress, a stock company having been formed and chartered with a present capital of \$40,000. Two (six and eight-inch) artesian wells have been sunk to a depth of 234 feet on the premises of Apollos Fuller, Esq., which have

been found, by actual test, adequate to the supply of six or eight thousand gallons of water per hour. The work of constructing an iron water tower, eighty feet high and twenty-five feet in diameter, is also well under way, and water pipes are now being laid, four feet and eight inches under ground, on our principal streets.

With the completion of this great work we may reasonably count on an unlimited supply, at all times and seasons, of pure water, one of the greatest of Nature's blessings, the wholesome sanitary influence of which upon the health of the community will doubtless be more and more appreciated as the years go by.

Touching a few other points of inquiry, we have nothing of special interest to report at this time.

THOMASTON—DR. GEO. D. FERGUSON, *Health Officer*.

Let me say at the beginning that the duties of the town health officer practically ends with his fault-finding. Many seem to think that it is his duty also to prosecute; but that is not the case.

The same health regulations as before remain in force, with this addition: "That the owners of property or tenements shall bear the expense of disinfection."

Permit me again to call attention to the rule that requires all complaints to be made in writing and signed with complainant's name.

That is the only voucher a health officer has for work that he is called upon to do, and of the many complaints made during the past year but a very few complied with the request.

During said year there were reported 9 cases of measles, 6 cases of scarlatina, 2 cases of diphtheria or croup, 20 cases of whooping cough, 5 cases of typhoid fever, and no other contagious diseases.

Epidemics of measles, whooping cough and mumps will occur if more rigid rules regarding contagious diseases are not adopted and enforced.

Tuberculosis is not required to be reported—one of the most contagious and the most fatal of all.

On the whole, the past year has been quite free from any very severe results of a contagious nature, and the death-rate has not been excessive on that account.

The disposal of garbage in all country villages is much the



same. Fire is the best and only destroyer of all, but how to do it is the burning question of the day.

*Methods of Sewage Disposal.*—A small portion of our community is sewered into the river very satisfactorily. The remainder is deposited about the premises, carried to the gutters in the streets, into small streams or cesspools—a condition of affairs which speaks for itself without further comment.

At no expense to the town, and but comparatively little to each individual owner of property, the whole village might be sewered and the trouble with health officers be at rest.

*Sanitary condition of Public Buildings.*—The school buildings have been thoroughly fumigated and disinfected according to the most approved methods, and on general principles are in a sanitary condition.

The fire department building still maintains its lead voluntarily for scrupulous cleanliness and good sanitary surroundings.

The "town hall" building early in the season was put in a good sanitary condition and has been faithfully kept so during the past year.

The water supply remains the same as of yore, and all that has been written or said on the subject still remains in force with much emphasis.

I will say, however, that the water company has done its best to eliminate the source of pollution at the north end, but while the process of law drags its weary length along, our unsuspecting community has been and is saved, as by a miracle, from being swept from the face of the earth. It can be stopped at once, and it should be.

It is to be hoped that sometime in the near future the purification of this water supply will be taken in hand and pushed with vigor until the village is supplied with what the charter grants the company the right to do, viz., supply the town with pure water.

*Nuisances.*—That swamp still remains the same cesspool of filth described in several previous reports.

Laws have been enacted sufficient to make this hot-bed of disease like unto a garden of roses, with but little if any expense to the town, and the citizens should demand that it be done.



THOMPSON—DR. LOWELL HOLBROOK, *Health Officer*.

*Measles*.—Have been prevalent through the spring and summer months. The cases have been numerous and generally of mild type. I have heard of no cases proving fatal from complications or otherwise. I have received no official notice of any cases, except by one physician, that he had several cases, calling for little care.

*Scarlet Fever*.—In some three instances I have been notified of cases of scarlatina, which I visited and saw that isolation of the patients was properly observed, and proper disinfection used. From none of these cases was there communication to other subjects.

*Diphtheria*.—No case of this disease in my opinion, except one.

*Whooping Cough*.—This disease extremely frequent. Epidemic last year has not appeared in this locality this year.

*Death-rate*.—During the extreme heat of the summer, the mortality in July from choleraic diseases, especially, exceeded the record of any similar period in the last decade. This I believe attributable to the unsanitary condition of some of our most populous villages—a fact coming to my knowledge only incidentally.

I have been officially notified in only two instances of existing nuisances calling for abatement, though I presume casual inspection would reveal others quite as injurious to public health.

Method of garbage disposal is by carting away, and generally quite effectually done.

*Sewage Disposal*.—Fairly good sewage systems exist in most of our villages; in some superior systems of recent construction, the disposal to distant low lands or running streams.

Sanitary condition of school-houses generally good; some might be improved. Of other public buildings good.

*Water Supply*.—Generally from wells. In other cases from springs, generally good.

TOLLAND—MR. EDWIN S. AGARD, *Health Officer*.

The town has been exceptionally free from the various epidemical diseases during the year.

There were two cases of scarlet fever; in both cases the children were exposed to the disease outside of the town, so far as I was able to ascertain.

The several school-houses in the town have been thoroughly disinfected, and the different committeemen promised to have the school-houses washed and cleaned before opening school in the fall. Several of the committeemen seemed to take an interest in the disinfecting of the school-houses, and looked upon it as a precaution that could afford to be made. I had one complaint of a privy vault belonging to District No. 1, and satisfactory changes were at once made in it.

I find that the more the health officer becomes identified with the people in his town the more and greater are his chances for usefulness, as the people keep him in mind, and stand ready to call for him in times of need from sickness and disease.

The sanitary condition of the school-houses is good.

Our water supply in Tolland street consists of aqueduct water, and is very pure ; outside the people take their water from wells.

TOWN AND BOROUGH OF TORRINGTON—DR. ELIAS PRATT,  
*Health Officer.*

There has been an epidemic of measles extending over a period from April until September. 239 cases were reported to the health officer. The epidemic, although extensive, was not of a virulent type. The deaths that occurred were from lung complications. The epidemic began in the outskirts of the town during April, and about a month later was in full blast, reaching its height during June.

The earlier cases were traced to a single case coming from a neighboring town, but no direct connection could be made out between those first ten cases and the outbreak in the borough. In the earlier part of the epidemic your health officer visited the families of those reported to him, and endeavored by advice to prevent the spread of the disease. His efforts were unavailing, owing to the popular belief that it is a good thing for children to have measles.

There have been two outbreaks of scarlet fever during the year, resulting in eleven cases. The cases were not very severe and the spread of the disease was prevented by a strict quarantine with isolation of the patients.

There have been four cases of diphtheria reported. Each case was isolated and the house quarantined. No secondary cases arose.

Only one case of whooping cough was reported during the year.

There have been 26 cases of typhoid fever during the year. These occurred in two outbreaks. The first was in the autumn of 1895, and the second during July and August of 1896. Nearly all cases can be traced to drinking of well water as the most probable cause. During the later summer months the public water becomes warm and somewhat unpalatable. A number of people in the borough drink well water at this time, and in those sections where this practice prevails the majority of the cases of typhoid fever are to be found. It is unusual to find a case of typhoid fever where only the public water has been used. The excreta of the patients is disinfected, but no quarantine is required.

One case of typho-malaria fever was reported.

The disposal of garbage is a serious question within the borough. It is the custom to throw garbage on any convenient lot, which results in great annoyance to the people in the vicinity and trouble to the health officer.

There is a good system of sewerage in the borough. There has been added 1,228 feet of new sewers during the past year.

The school-houses are in a good sanitary condition. They were all thoroughly disinfected during the last vacation.

The water supply is excellent. The greatest needs at present are : the more general use of public sewers and the doing away of privies ; the stopping of the use of well water for drinking purposes, and the providing of a place for the dumping of garbage.

TRUMBULL—DR. BENJ. W. WHITE, *Health Officer*.

Measles : this disease which has prevailed very largely throughout the county, has been confined to three families (supposing all cases to have been reported), two cases in one family, three in another, and one in another. The reason this disease was not transmitted out of these families is, because I believe the people are respecting and intend to respect the very rigid rules governing the quarantine of measles as well as all other forms of contagious or infectious diseases.

Two cases of scarlet fever were reported, both belonging to the same family, and the disease assumed a mild character. I quarantined the cases, and after they recovered fumigated the house and directed thorough disinfection of linen, etc., thus holding the

disease within one house. One case of diphtheria developed in the town during the year. It was of the most violent type and proved fatal within sixty hours. I ordered a strictly private and rapid burial of the body and kept the house where the man lived and died under strict quarantine until full and complete fumigation and disinfection of everything surrounding had been carried out. The disease was confined in this manner, and no other individual suffered.

Nuisances inspected and remedied during the year numbered eighteen. These consisted chiefly of surface privies which were situated in too close proximity to either springs, wells or streams contributing to waters used by the public for drinking and culinary purposes.

Upon premises where these privy vaults were obliged to be maintained, I had them built of brick and stone and lined with waterproof cement. Six of this character were cheerfully and promptly built by the Bridgeport Hydraulic Company, because they existed on the water shed controlled by this company, who furnish the city of Bridgeport with its water supply. Other privies, pig-pens and sink drains were abolished or remedied at the expense of the owners of premises where such were located. I believe garbage is generally fed to stock, such portion of it as can be used in that manner; the remainder I have advised to be burned.

The usual practice of exposing sewage to the elements by throwing it upon the ground, where it is quickly oxygenized, is generally adhered to, and I believe it to be a good method in rural districts.

The school-houses and public buildings in the town, so far as I can learn, are in a fair sanitary condition. In the year 1895 I inspected all the school-houses and left them in a good state of repair and sanitation.

An effort to obtain pure milk should be carried out by individuals, competent to order a polished cleanliness of all vessels used for conveying and distributing milk, to demand the strictest sanitation at the stables and dairy, and to destroy all diseased and unhealthy cattle from which milk is taken.



UNION—MR. E. W. UPHAM, *Health Officer*.

There has been no infectious disease in town to my knowledge during the year. It has been a year of general good health with but few deaths.

The sanitary condition of school-houses is fairly good. There are but few scholars in any school-house in town.

Our church is well ventilated.

The water supply is mostly from wells, which are rather low at present.

VERNON—DR. A. R. GOODRICH, *Health Officer*.

No epidemic of a serious character has prevailed, with the exception of a few cases of measles, first contracted by a child on the cars.

The families where the disease prevailed, when brought to my attention, were strictly quarantined—in this manner a widespread epidemic has been prevented. In the first outbreak, the physician in attendance failed in his duty in not reporting the existence of the disease, thus causing it to spread to a limited extent. Some fifteen cases was the result of negligence in not reporting the case in accordance with the public acts made and provided. Most of the cases of a mild character; no deaths.

Diphtheria, only one case of a serious character, which proved fatal. As soon as the case was called to my attention, a strict quarantine was established and maintained during the sickness, death, burial, and disinfection of all clothing; the house perfectly fumigated by burning sulphur, painting, whitewashing, papering, and the surroundings placed in a perfectly sanitary condition. The body, when disinfected, placed in an air-tight coffin, and buried at nightfall, and no one permitted to attend burial, except those who had immediate care of the case.

Tonsilitis and like affections of the throat have prevailed, but not of a serious character.

*Typhoid Fever*.—Two cases reported, occurring during the months of August and September; these were of a mild character, and in places of a fair sanitary condition.

One case of cerebro-spinal meningitis of an interesting character came to my notice. This occurred in a child three days old. Nothing remarkable noticed in the child or mother during delivery; child fair and to all appearances healthy. On the third day



it was seized with convulsions of the most intense character, head drawn backward with profuse perspiration. These symptoms continued for twelve hours, when death came to its relief. Father and mother perfectly healthy, this one being their eighth child.

The system of sewerage the same as in years past, water conveyed from the houses by surface drainage (which is not as it should be), for polluting the water of wells near by is almost sure to follow, thus conveying the germs, producing diphtheria, scarlet fever or typhoid fever, which can be attributed to a dispensation of ignorance instead of Providence.

No manure heaps, privies, sinks or other receptacles for filth or refuse of any kind, should on any account be near to wells or springs—the further off the better. If the soil be of heavy clay the danger is of course lessened, but on all porous soil pollution is sure to follow.

I have twice during the year inspected all the school-houses in town, with out-buildings connected, had them fumigated, and when necessary the walls whitewashed, and out-houses placed in the best sanitary condition possible.

A number of complaints have been made as to the unsanitary condition of certain surroundings, all of which have been cheerfully removed.

I cannot but speak in high terms of praise of the good work done by the County Commissioners in providing for the comfort and health of the children placed in our model County Home, of the fatherly and motherly care bestowed upon these unfortunate children placed in care of the superintendent and matron, in sickness and in health.

After the outbreak of diphtheria some two years since, the house and its system of sewage was entirely reconstructed, out-buildings with water closets torn out and replaced with those of modern improvements, play grounds enlarged and free from all obnoxious odors.

There is one thing to which I desire to again call attention, and that is the supply and mode of conducting water to the institution. The water is now conveyed in a lead pipe for some half mile, and it cannot but have an injurious effect upon all those who use it. Another thing, the supply is barely sufficient to meet the daily wants of consumption, and should a fire occur the whole property, to say nothing of the lives of some fifty or sixty human beings, would be at the mercy of the flames. A galvanized

iron pipe of larger capacity should be substituted, with a reservoir sufficiently elevated, with hose connected in every story of the building to combat fire, should one occur, thus affording protection against fire, and removal of the poisonous lead pipe, which works slowly but surely upon all who use the water, the effects of which are manifest through life.

No sanitary improvements as to sewers, drainage of lands, public water supply, or public parks, have been inaugurated the past year.

I feel confident that the public in general are being educated to a higher standard, as regards the sanitary condition surrounding their homes, and that health and happiness is of more vital importance than stagnant pools of water standing at their back doors.

VOLUNTOWN—MR. J. K. BITGOOD, *Health Officer*.

The prevalence of contagious or infectious diseases during the year is as follows :

There was one case of measles in February. Origin not traced, nor have any secondary cases followed. There were two cases of diphtheria. One case in November, which proved fatal, and one of mild form in February, in a different quarter of the town. The case that occurred in November was that of a little girl about nine years old. She attended school three or four days with a sore throat before it was known that she had diphtheria. Antitoxine was administered. By this time, she had a well-developed and typical case of diphtheria. Origin unknown. School was suspended for a while, and isolation of cases and disinfection of rooms carried out. No spread of the disease in either case. Only one complaint made, which was of decaying animal matter. It was abated very soon upon request.

The public schools were visited once during the year, and their condition found somewhat improved. A still greater improvement in their sanitary conditions may be looked for during the coming year. The town depends on wells for its supply of water for drinking and culinary purposes. These wells, for the most part, are a safe and abundant source of pure water.

WALLINGFORD—DR. WM. P. WILSON, *Health Officer*.

The number of cases of contagious diseases reported during the past year is thirty-seven, as follows :

Diphtheria, seven ; scarlet fever, nine ; measles, ten ; typhoid fever, eleven.

There have been complaints of twenty-three nuisances reported to me, and all have been investigated, and ordered abated.

During the past month I have inspected and fumigated all the schools of the town and borough. I would recommend that the roofs over the passages between the High School and South Main St. School buildings be removed and the privies properly ventilated, as I consider the present arrangement a menace to the health of the pupils.

Owing to the fact that the town or borough has provided no systematic collection of garbage or a proper place for a public dumping ground, I am unable, as health officer, to carry out sanitary regulations as required. I would recommend that a suitable place be provided outside of the borough limits for a public dumping ground. I would also recommend that the borough procure a sufficient number of air-tight casks, into which the dirt taken from the catch basins could be placed for removal instead of piling it up on the streets, as is the custom at the present time, thereby endangering the public health.

WARREN—MR. WILLIAM FORESTELLE, *Health Officer*.

Regarding the contagious diseases, there have been none but measles. There were seven cases of measles reported to me during the year. They were in a light form. I did not do any thing about the matter, as I was advised by county health officer that if they were spread when I was first aware of it it would be best not to quarantine, and it was well spread when I was notified. I found the school-houses in good, fair condition when I examined.

WASHINGTON—R. A. MARCY, M.D., *Health Officer*.

During the year, outside of examining the school-houses of the town there has been no work of especial interest. It has been a repetition of or rather seeing that former orders were respected.

We have had an epidemic of measles, which cases as far as I know were properly quarantined and were usually of a mild type. Typhoid fever, three cases, no deaths ; could not trace the origin. Method of sewerage disposal, into the river by small streams.

The sanitary condition of the school-houses are bad. The public buildings good. Water supply good as a rule. There has been no public works of sanitary influence undertaken. In regard to the milk supply there has been several herds of cows examined for tuberculosis.

CITY OF WATERBURY—E. W. McDONALD, M. D., *Health Officer*.

The following list of contagious diseases has been reported to the health officer of the city of Waterbury during the year ending Aug. 21, 1896.

*Measles*—701 cases reported. We had an epidemic of measles during the months of April, May and June, of a mild type, mortality light. Very few deaths except where some complications existed.

*Scarlet Fever*—Fifty-four cases reported. Most of those cases mild, many of them not requiring the attention of a physician.

*Diphtheria and Croup*—Eighty cases reported.

*Typhoid Fever*—Fifty-five cases reported. Those cases were not confined to any particular part of the city. The origin in most cases was unknown, but in a few the disease might be traced to bad drainage and unsanitary conditions.

*Garbage Disposal*—The garbage of the city is removed by contract, and taken about four miles outside the city limits, where it in part is buried and in part fed to swine. I hope in the near future we may be able to dispose of it by other means.

*Sewage Disposal*—Sewage of the city is disposed of by sewers, which empty into the Naugatuck river, at the southern extremity of the city, and is carried down stream, which in my opinion is not a good way to dispose of it, but at present there is a committee appointed by the city government to investigate the subject, and the city also employed Mr. Hering, an eminent engineer of New York, to examine the subject, and report what he thought would be the best means of its disposal. We have not yet received his report.

Public care of contagious diseases is by quarantine, placarding houses, etc., and is I think fairly effectual.

Sanitation of school-houses and other public buildings is very good. The health officer and sanitary inspector visited each school-house in August and found very little to complain of.

The water supply is principally from the new reservoir about twelve miles outside the city, and while we have a plentiful sup-



ply of chemically pure water, it is sometimes discolored and unpleasant to use, but I hope time will improve those conditions.

Public sanitary work undertaken during the year consists of endeavors to give us a better disposal of sewage, a good water supply and also the building of a contagious disease hospital, which has been just completed. No public action has been taken on milk supply.

During the year the board of health has been endeavoring to secure a public dumping ground, but so far, I regret to say, have not been successful.

TOWN OF WATERBURY—DR. B. A. O'HARA, *Health Officer*.

The town of Waterbury has been exempt from any fatal epidemic during the past year. In the spring and early summer an unusual epidemic of measles in a mild form spread over this section of the state. Here, notwithstanding all the precautions necessary to minimize the contagion were observed as far as lay in the power of the health officer, 172 cases were reported.

I am of the opinion that prompt attention and strict exclusion from school of the children of families afflicted had a potent influence in preventing the spread of the disease to a still greater extent.

It is a well-known fact that many parents, following an old belief and custom, regard measles as a mild and harmless contagion; that it is a natural inheritance of children which must be endured sometime, and the younger the person having it the better. Its seriousness is not realized, and probably two-thirds of measles cases are not reported, as no physician is called in. It will take considerable missionary work to educate the people to a proper respect for measles.

Ten cases of scarlet fever, five of diphtheria, and two of membranous croup, were reported and all the precautions observed.

All the schools of the different town districts were visited in April and instructions given to the teachers in regard to the attendance of children from houses infected by measles and other contagious diseases. In all such cases those children were not allowed to return to school without a permit from the health officer.

One admirable result of agitation and an indication of an up-to-date town, is the construction last spring of a modern and



commodious house for contagious diseases. This was built by the city and is located on the town farm, the land of which was leased to the city for 99 years. The town enjoys the privilege of its use, but as yet, fortunately, there has been no occasion for it.

Several cases of the violation of the law concerning the burial of dead animals were reported. The culprits were apprehended and compelled to bury the carcasses in a proper manner.

Six cases of the pollution of drinking wells were reported. The causes of pollution in each case were abolished.

Considerable garbage and refuse had been surreptitiously dumped near the roadsides. In two of those cases the guilty parties were found out and compelled to remove the same and the surroundings cleaned up to the satisfaction of the health officer.

Notices in regard to the cleansing and disinfecting of vaults and out-houses were sent to the committees of the different town schools. These were afterward visited, and in every case compliance with the law was noted.

The sources of the water supply of ten different ice-ponds from which ice was harvested for public use, were explored and carefully inspected. In three cases some cause of contamination was discovered and ordered abated. Notices to this effect were promptly complied with.

Complaint was lodged with the town health officer that the ice from Wedge's pond was packed in poisonous sawdust. Upon investigation it was learned that the sawdust used in packing the ice was taken from a brass mill where it had been used in cleaning brass. This case was referred to the State Board of Health by County Health Officer Hoadley, which decided that its use was not injurious to the public health, provided the ice is carefully washed clean of the packing before using.

The twenty-three school-rooms of the schools were thoroughly fumigated and cleansed during the summer vacation.

Owing to the decided stand taken by the health officer last year when the piggeries on the outskirts of the town gave so much trouble, but few complaints have been reported this year. The causes of these few were immediately abolished upon suggestion of health officer.

One source of gratification to the health officer and to the residents of the rapidly-increasing village of Waterville is the construction of a sewer through two of its principal streets, with

which many of the dwellings and out-houses are already connected.

The recently completed line of the city's water supply from the "Branch," with which Waterville may be supplied, will be a blessing to this thriving community.

The fact is brought forward with pardonable pride that, out of the great number of cases referred to the health officer during the closing year, no appeal has been made from his numerous decisions.

The following is the number of contagious diseases of which the Town Health Officer has had cognizance during the year : measles, 172 ; scarlet fever, 10 ; diphtheria, 5 ; membranous croup, 2 ; typhoid fever, 4.

WATERFORD—DR. G. MAYNARD MINOR, *Health Officer*.

I have seen a number of cases of measles, mostly of mild type. All the cases I can trace direct to New London as the starting point. On the discovery of what bid fair to be an epidemic, I closed the school in the village, thereby preventing any outbreak.

*Diphtheria*.—One case in a Jewish family who had lived in a house at Chesterfield, where two cases of diphtheria were said to have died. The family in which the case occurred moved into Waterford, and the following day I was called and discovered that a child of about five years had the disease. I had the rest of the family (with the exception of mother and baby in arms), two children and two men boarders, removed to a barn and quarantined both house and barn and prevented the spread of the disease. Case recovered.

*Malarial Disorders*.—I have seen a great many cases of malaria fever of the intermittent type. It became an epidemic, as almost every house had its sufferers, and throughout the town the people were reported as having chills.

*Locality*.—No locality seemed to be exempt, except in one notable exception. Not a case occurred along the borders of the "Niantic river."

*Disposal of Garbage*.—Most of the garbage is used as food for hogs and poultry.

*Sewage*.—Sink drains emptying upon the surface as a rule, although there is a growing tendency to vaults, with regular evacuation and disinfection. (A wrong tendency.—C. A. L., Sec'y.)

*Schools.*—The sanitary condition of the school-houses is fairly good.

*Water.*—Supply from wells, and in some cases the water is very poor.

*Official Work.*—But few complaints have been made during the year. The fact that a health officer has some power has overcome the necessity of issuing a formal complaint. In a few cases, however, it has been necessary to act, but no appeals have been taken.

WATERTOWN—DR. WALTER S. MUNGER, *Health Officer*.

There have been six complaints of nuisances; in every case of which a notification and request that it shall be abated has been sufficient.

Twice in the year I have examined the school-houses and adjoining premises in the town, and with two or three exceptions found them in good and cleanly condition, and where not found so, they have been made so upon request.

When I have had reason to suspect that there was contagious or infectious diseases in any school I have investigated, and when found necessary, I have ordered that any such diseased scholar, or any from families where such disease existed, should not be allowed to attend school; also when I have known of such diseases in families not attending school, I have requested either directly or through the attending physician, that they should not in any way expose others, either by going abroad or by allowing others to come into the contagious atmosphere.

As to disinfecting and other means of preventing the spread of malignant diseases in families where it existed, I have usually left it to the attending physician, believing that to be the most effective way of accomplishing the desired results.

The health of the town for the year ending August 31st has been, on the whole, quite good:

Of deaths there has been twenty-six. Concerning contagious and infectious diseases: of measles, there have been eleven cases reported; of scarlet fever, there have been two cases; of diphtheria, one case; of membranous croup, two cases; of whooping cough, four; of typhoid fever, ten cases were reported.

Concerning the origin of the typhoid cases, five at least evidently contracted the disease out of town, and two were brought here sick with the disease.

Pneumonia and broncho-pneumonia have caused five deaths, being the most fatal of all diseases.

As to garbage and sewage disposal: It has usually been left to mother earth to dispose of to the best of her ability; and I think usually she has done the work very well, manufacturing what would have been injurious and poisonous into life-giving food.

The public buildings, to wit, the churches and public hall, together with the public library, are, I think, in a good sanitary condition.

The water supply is mostly from wells; a few drawing their water from springs some distance through pipes.

WEST HARTFORD—DR. L. D. McLEAN, *Health Officer*.

*Measles*.—Cases reported, forty-five. This contagion was epidemic among children during the months of April and May, especially in the north section of the town. The disease was mild in type, and attended with a comparatively low rate of mortality. It has been difficult to locate its origin, though the contagion evidently extended from the city of Hartford, where the disease was quite prevalent at that time.

*Scarlet Fever*.—Cases reported, four. Of these cases I have also been unable to discover the primary cause or origin; save, possibly, the last, and fatal case, which was imported from a neighboring town. The malignancy of this case is ascribed to the enfeebled constitution of the patient.

*Diphtheria*.—Case reported, one. A typical case of the infection as demonstrated by test and the microscope. In the absence of other proof of its primary origin, it is my opinion that it was caused by unsanitary surroundings.

*Typhoid Fever*.—Cases, five. Report and investigation in these cases fail to reveal their origin, but I may venture the opinion that the latent cause was rendered fertile and active by the extreme summer heat.

*Garbage*.—We have no method of collecting and disposal of garbage, and the responsibility thereof rests upon each individual householder, who is prompted by intelligence, pride and self-interest to the disposal of garbage so that it shall not offend his neighbor or the public.

As to swill, however, this in common with other suburban



towns seems to be a favorite dumping ground. So pronounced has the offence become, and so numerous the complaints thereof, that, at the summer meeting of the health officers of Hartford County, it was considered best to adopt a rule prohibiting the cartage of swill from the city into the towns adjoining Hartford during the warm season. Such a rule was adopted, posted, published and put in force in this town. As a result I may report progress toward the abatement of the offence. The raising of swine in large numbers becomes a flagrant nuisance among our increasing populations, unless great care is taken to keep their pens and surroundings clean.

*Sewage.*—The matter of the disposal of sewage has become one of the gravest importance to this town. Already there is need, along with our public water supply, of something like a public sewage system. We cannot always tolerate, much less perpetuate the cesspool, nor even the more rational and sanitary method of discharging our sewage “in the open.” Either by connection with the city’s system, or by independent method, we must find our antidote, prevention and cure, for the evil that exists, and the graver peril that portends.

*School-Houses.*—I have made inspection of the school-houses and premises of this town, and as to ventilation, drainage and cleanliness, I find their sanitary condition and appointments satisfactory.

*Railroad Station.*—As my duty is, I have also inspected the one railway station in this town, and reported its sanitary condition to the proper authority.

*Purity of Water Supply.*—To the Water Commission of the city of Hartford we are indebted for the final abatement of the sewage nuisance at the “Pinney farm.” And, I know of no other probable source of contamination of our public water supply within my jurisdiction.

*Pure Ice Supply.*—My attention and service have been directed to prevent the possible contamination of our public ice supply by drainage from barns and sewage from new residences, and some in the process of construction adjacent to the streams that feed Trout Brook ponds. In this service I am confronted, not opposed, by the hackneyed fallacy that (foul) water will “purify itself in flowing two miles.” How does it “purify itself?” Simply by deposit of its ponderable filth on the bed of the stream or pond, perhaps parting by evaporation, en route, with its malarial poison,



while the infecting microbe is carried along in the current till it finds its victim or its tomb in the sea.

Under the head of "Contagion and Infection," I should have stated that the measures adopted for disinfection, prophylaxis, etc., are those indorsed by our public health authorities, viz : isolation and quarantine, cleanliness, antiseptics and disinfectants, by fumigation, spray, bath and inunctions.

WESTON.—DR. FRANK GORHAM, *Health Officer*.

The health of the residents of this town during the period covered by this report has sustained the reputation of Weston as a health resort. The only cases of contagious and infectious diseases reported to the health officer being : measles, 32 cases (of severe type) ; diphtheria, whooping cough, typhoid fever, of each one case.

The mortality rate has been very low, only seven deaths occurring during the year, and none of them caused by any contagious or infectious disease.

No complaint concerning nuisances has been received during the year.

The sanitary condition of the school-houses and surroundings has been investigated, and found satisfactory.

WESTPORT.—DR. L. T. DAY, *Health Officer*.

In compliance with law, I hereby present my annual report as Town Health Officer :

The following are the contagious diseases reported to the health officer for the year : measles, 215 ; diphtheria and croup, 5 ; whooping cough, 3 ; typhoid fever, 2 ; scarlet fever, 3.

*The Measles Epidemic.*—During the year there were, properly speaking, two distinct and separate epidemics, the first beginning in September and lasting through October. It originated in the East Long Lots School District. Owing to the comparatively isolated condition of the region and a fairly rigid quarantine, there were no cases reported outside of this particular section. Twenty cases were reported. The origin was supposed to be from a family in whose house was a visitor just arrived from foreign shores. The second epidemic arrived through visitors from Troy, N. Y., in the latter part of December. The West Saugatuck School with 112 children was exposed. After

the first few cases it was found useless to attempt quarantine, and the houses were simply placarded and ordered disinfected after the subsidence of the disease. The epidemic proper lasted through April, 193 cases being reported. There were two sporadic cases reported during June. This is not by any means the actual number of cases occurring in the town, as many families having the disease employed no physician and did not report the cases as required by law. Many people seem to think measles a light disease and of little account, freely exposing their families and others to the contagion. It is not, perhaps, the immediate attack which is particularly dangerous, but the diseases which are apt to follow in a constitution weakened by measles often result fatally.

As will be seen by the following mortality table taken from the State Board of Health Monthly Bulletin, there were nearly as many deaths from measles as from diphtheria, and nearly five times as many deaths from measles as from scarlet fever. Even whooping cough claims nearly as many victims as scarlet fever.

There were only two reported deaths from measles in the town of Westport during the epidemics.

*Mortality Table.*—January, 1896, to July 31st: Measles, 226; whooping cough, 35; scarlet fever, 46; diphtheria, 256.

December 5th, the following additional regulation was adopted by the Town Health Officer:

“When a case of contagious or infectious disease shall have occurred, the householder upon whose premises the case has been confined, shall at his own expense, upon the death, convalescence or removal of the patient, disinfect such premises, or so much thereof as the Town Health Officer shall direct, together with such articles as have been exposed to infection, to the satisfaction of the Town Health Officer.”

During the year ten nuisances have been examined on complaints, and ordered abated. These were foul garbage heaps, defective drains, cesspools, neglected privies, and one natural pond nuisance.

There is no regular system for the disposal of garbage; the traditional heap in the back yard is the usual depository for house refuse. Cesspools are still maintained to the detriment of the health of individuals, if not to the public health. Where a town has a public water supply, adequate sewers are essential.

The school-houses are in a fair sanitary condition. After the measles epidemic the East Long Lots and the West Saugatuck school-houses were thoroughly fumigated with sulphur. All of the others have been ordered thoroughly cleaned and fumigated with sulphur, by recommendation of the State Board of Health.

The other public buildings are in good sanitary condition.

The water supply is good, no complaints having been received this year.

The Burial Hill Public Park in Green's Farms has been made use of as a dumping-ground for garbage and all kinds of refuse. Signs are now posted prohibiting the dumping of garbage or any kind of refuse. Any one disregarding the above notice will be prosecuted according to law.

Malaria is more prevalent this year than for many years, in the form of "chills and fever."

WETHERSFIELD—DR. EDWARD G. FOX, *Health Officer.*

The following cases of contagious diseases have been reported : measles, seventeen ; diphtheria, one ; whooping cough, three ; typhoid fever, one ; no deaths.

As regards the method of garbage disposal, we have no means provided. Also in regard to sewage none.

The school-houses have been inspected during the year and found in a fair sanitary condition. The ventilation of the district school-houses is insufficient. The modern ventilation and sanitary arrangement of the new High School building is all that could be desired.

The outbuildings connected with the school-houses in the first, third, fourth, fifth and sixth districts were in a most unsanitary condition. The attendance during the past year at the different schools has not been interfered with by the presence of any contagious diseases.

The water supply is mostly by wells. One section of the town is supplied by water from the reservoirs which supply Hartford. A portion of Griswoldville is also supplied by reservoir.

We have undertaken nothing during the past year to promote the public health in regard to sewer construction, public water supply, drainage, &c.

Visits of inspection have been made in four cases to remove nuisances, which was readily corrected. It has been necessary to

make several visits to the "Bone-boiling establishment" in order to keep it in a presentable condition.

In August, 1896, I received instructions from the Secretary of the State Board of Health to have all school buildings cleaned and fumigated before September 1st, 1896, which was thoroughly done. It was the first time in many years that all the school buildings have received this treatment.

CITY OF WILLIMANTIC—DR. F. E. WILCOX, *Health Officer*.

In compliance with your request of recent date, I report as follows : Contagious and infectious diseases occurring during the year—Measles, three ; diphtheria, three ; typhoid fever, fourteen.

There is no provision for disposal of garbage. The city is only partly sewered, though considerable work has been done in extending it during the past year. There is no provision for the public care of contagious diseases. The sanitary condition of school houses and other public buildings is good, with the exception of the old Town building, which will soon be abandoned for the new one, just completed. No public sanitary work has been undertaken during the year, except on sewers, as stated above.

WILLINGTON—MR. C. C. ESSEX, *Health Officer*.

The past year has been very healthy, the only instances of contagious and infectious diseases, which came to my knowledge, being six mild cases of whooping cough. The sanitary condition of some of our dwellings is not what it should be, and the coöperation of our citizens is desired to make improvements in this line. Most people are a little apt to think that it is their neighbor who has a sink drain emptying under the windows, a mess of garbage at the door, or an offensive pig-sty or privy near by, which contaminates the water they drink. Shall we get out of the rut, and each do his part towards securing better sanitation, or will you wait until the germs of disease claim some member of your family, and then lament over your loss ?

During the year only two complaints of nuisances were received, and these abated. These nuisances were the carcasses of two horses and one cow. The cow was killed because afflicted with tuberculosis and remained a month unburied before it became officially known. In a rural township, like this, the methods of



garbage disposal vary, according to the idea of the individual, and are not always the best.

Our sewage disposal is on the surface of the ground, but in some cases to vaults, or through tiling to running water. Our public buildings consist mostly of school-houses, and are not the best. Our water supply is from springs and wells, and is excellent. To the knowledge of the health officer there are six milk dealers in town, and two of them have had their cows inspected by the commissioners of domestic animals.

WILTON—DR. A. B. GORHAM, *Health Officer*.

Quite a large number of cases of measles have been reported and a large number not reported; an epidemic it seemed. The first cases were strictly quarantined, but shortly the disease spread so rapidly that quarantine seemed useless and it was deemed best to not enforce it strictly, but to take ordinary means to lessen, if possible, the spread of the disease, such as isolating the patients, keeping from coming in contact with the infected ones, thorough ventilation and disinfection of clothing and apartments, before other children were allowed to occupy them.

Only one nuisance came to my notice and that was readily adjusted without trouble.

The school buildings were examined and found to be in somewhat better condition than last year, though they were all ordered cleaned, and in case a contagious disease had occurred there, thorough cleaning with sulphur fumigation ordered.

Wilton has, generally speaking, very good drainage.

The water supply is good, being derived from wells and springs.

Last year it was suggested that each and every school-house should have its own well upon the school grounds, (I think only two have their own wells,) and that a place be provided for the care of malignant and contagious diseases, neither of which I believe has received any attention. I would again call attention to this matter.

WINCHESTER AND BOROUGH OF WINSTED—DR. W. S. RICHARDS,  
*Health Officer*.

*Measles*—In the town and borough for the year there has been 142 cases, of which about sixty were in the orphanage asylum.

In May, June and July it was epidemic. It was carried here



from another town. No physician was employed in the first cases. The children attended school all the time; thus it started and spread. The epidemic was mild in the main, only one death occurring from the measles. Restriction by quarantine and fumigation.

*Scarlet Fever*—Ten cases; at no time was it epidemic. Origin of most cases could be traced to direct contact in person. But in one or two cases it could be traced to something being overlooked in disinfection—some plaything stowed away that should have been burned. Restriction by quarantining, burning, disinfection and fumigation.

*Diphtheria*—Only two cases during the year. They were separated by a distance of four miles; had no connection with each other discoverable. One came from Waterbury, Ct. Of the other we were unable to find the origin. Restriction by nearly everything being burned that the patient came in contact with, washing everything that was not burned with corrosive sublimate solution and fumigating with sulphur. There were no secondary cases.

*Typhoid Fever*—Four cases. One came from Hartford, and the origin of the other cases I could not find. Restriction by disinfecting the discharges with bromine.

*Garbage*—Most of the garbage is thrown into a small river that runs through the town and borough parallel with Main street its entire length. Results—when there is plenty of water in the river as in the spring, it is carried away almost as fast as it is deposited. When there is not much water, about nine months of the year, it just stays there and decays. What isn't dumped into the river is dumped on vacant lots.

*Sewerage*—The disposal of the sewage for more than half the town is in the same river as the garbage, and the results are the same. The remainder of the sewage is deposited in cesspools and on the open ground. We have not traced any direct infection from the river.

*The School Houses*—These were examined last year; have not been this. Last year there were several improvements advised, particularly in the two districts in the borough. This advice has been carried out and improved upon and when the improvements now under construction are completed the sanitary condition of the school-houses of these two districts will I think be all that could be asked. The other districts are simply country school houses.

Sanitary condition of the public buildings—Don't know. Have never examined them.

*Water Supply*—Within the last year has been changed from Highland lake to Crystal lake. It has only just been completed, so there is little to say about it. I don't think any analysis has been made of the water we now use.

WINDHAM—DR. FREDERICK E. WILCOX, *Health Officer*.

Contagious and infectious diseases occurring during the year : Typhoid fever, 1.

There occurred in November seven cases of scabies in children of two families, four of which were attending school. Those in school were removed, and the whole cared for until well ; when their clothing and homes were thoroughly fumigated.

Garbage and sewage disposal remain as heretofore. Sanitary condition of the school-houses are unchanged from that of former years.

No public works of sanitary influence have been undertaken during the past year.

WINDSOR—DR. NEWTON S. BELL, *Health Officer*.

During the year there have been reported to this office the following contagious diseases :

Of measles, which were unusually prevalent and in many instances quite serious, there have been 24 cases ; 1 death.

Of scarlet fever there were four cases reported, of which two contracted the disease in Hartford. They were in entirely different sections of the town, and no other case followed either. The other two cases (very mild) were in one family and the source unknown ; no deaths.

And of diphtheria there has been but one case, very mild.

*Whooping Cough*—4 cases.

*Typhoid Fever*—There have been eight cases reported. There has been in the year just ended a prompt report of contagious diseases to the health officer, being an improvement over last year in that respect ; and in every case of contagious disease strict quarantine has been enforced.

*Garbage Disposal*—Each family has taken care of its own, only one complaint on that score (house garbage) having been brought to the notice of the health officer and promptly removed.

The sanitary condition of the school-houses throughout the town is good, of which there has been personal inspection within the last month.

The supply of water for the village is from springs, the rest of the outlying town using wells as in by-gone days.

There has been complaint made to the health officer of eight nuisances, but in every instance they were promptly abated or removed on notification of the same by the health officer.

WINDSOR LOCKS—DR. JOSEPH A. COOGAN, *Health Officer*.

*Contagious Diseases.*—The following contagious diseases were reported to the Town Health Officer during the year : measles, 3 ; scarlet fever, 47 ; diphtheria and croup, 19 ; typhoid fever, 4.

Many cases of measles were not reported.

Forty-seven cases of scarlet fever during the past twelve months ought to influence the people to strictly abide by the orders as regards posting, isolation and disinfection.

Nineteen cases of diphtheria were reported, mostly of a non-malignant type.

Four cases of typhoid fever, the smallest number for the past eight years.

*Garbage.*—No public disposal of garbage. Individuals either burn or bury it as a rule. Exceptionally it is carted to the dumping-ground on the bank of the Connecticut, a mile below the village proper.

*Sewers.*—A charter has been granted by the legislature ; sewer commissioners have been elected ; plans and specifications have been obtained ; still the citizens hesitate and postpone the building of the sewer, principally on account of the expense. The County Health Officer insists that Windsor Locks is the worst sewered town in the whole county of Hartford. Another spring every property-owner will be compelled to disconnect all sewage-pipes made with the surface-drains ; and the law will be invoked to compel this town to take proper care of its sewage disposal.

The sanitary condition of the public and parochial schools is in excellent shape, owing to the care given during the summer vacation by cleansing, painting and disinfecting.

The town hall is apparently in good sanitary condition, but the adjoining building, or so-called lock-up, needs close and constant attention from the authorities.

The water supply is abundant and excellent. The water, as shown by analysis, is second to none in the state.

*Improvements.*—Nearly half a mile of road has been drained and macadamized. Considerable improvements have been made in sections of the town as regards sidewalks, and the sentiment seems to be growing that no year should elapse without an effort for improvement toward the health and happiness of our people.

The health officer feels it incumbent on him to state that, with one exception, his orders have been cheerfully obeyed during the past year.

WOLCOTT—MR. J. HENRY GARRIGUS, *Health Officer.*

Diseases reported to me were: measles, 8 ; scarlet fever, 1 ; typhoid fever, 1.

No other infectious diseases have been reported or come to our knowledge. The case of typhoid fever was reported to me by one of the selectmen, and on investigation found a child about six years old who was sick with what the mother and father informed me was typhoid fever. To the question, "Did the doctor call it typhoid fever?" they answered "Yes." I wrote to the doctor, but failed to get any reply. I then wrote to County Health Officer C. E. Hoadley, who prosecuted the case and secured a conviction. The case was contracted while visiting in Waterbury. No other case followed.

Nov. 5, 1895, was notified of a case of scarlet fever. A child, ten years old, came home from school sick. Ordered school closed, pending investigation, &c. Found another child attending school, who had been sick with scarlet fever, her sister having contracted it in Waterbury, three members of her family having had the fever, but had not employed a doctor. The family live in an isolated part of the town, far from neighbors. Nov. 9 I fumigated the house and school-house, after which the school resumed its session. The first child was isolated and sulphur-fumes freely used in other parts of the house. When convalescent, the child was thoroughly bathed and the clothing and room disinfected. No other cases followed. Gave permission for the children to return to school Dec. 3.

Two cases of measles were contracted in Waterbury, and the other cases followed in the same families. The other cases had



been exposed before a doctor was called or the health officer had any knowledge of the primary cases.

There were probably other cases in town which did not come to our knowledge, where no physician was called. The cases were mild with children, but virulent with adults. So far as we know, all have recovered.

The schools were not in session and the spread of the disease was not as general as where the population is more dense.

The very small amount of garbage accumulated in our country kitchens is disposed of in the poultry-yard or pig-pen.

We have no sewer, but the waste-water from the kitchen-sink is conducted to a convenient place on top of the ground, where it is properly cared for as occasion requires. The out-houses are so arranged as to be easily cleaned and receive frequent attention, their contents being composted with earth and used as fertilizer.

Sept. 26, 1895, visited all the schools in town, inspected out-building, left health rules with the teachers; found the buildings in fair condition.

May 4, 1896, visited all the schools in town, found their sanitary condition greatly improved from what they were on former occasions.

Aug. 29, 1896, fumigated the school-houses in town. The selectmen are having them thoroughly cleaned. Found the North school building somewhat out of repair and notified selectmen, who have given orders for repairs to be made.

*Public Buildings.*—The church and chapel are in good sanitary condition. The town hall, which is seldom used, is somewhat neglected.

The water supply of our town is from wells and is good. The ice is taken from ponds which supply Mad river and is pure.

Oct. 26, 1895, received notice from teacher of Center school that there were complaints made to her that there were head-lice in the school. I visited the school; found abundant evidence that the complaint was well founded. I also visited twelve families; informed the parents what remedy to apply (alcohol and water, equal parts).

Nov. 25, 1895, again visited the school and found that the remedy had been applied, except in one family, where I made the application myself, after which I gave the children permission to return to school. The school visitor has since informed me that this school had been afflicted with lice for five years. Our victory



was complete.. The mothers are truly grateful for their deliverance. Several other visits were made, investigating some false reports and attending to minor matters of less importance.

The health of our town has been remarkably good during the past year.

I have met with the hearty coöperation of the first selectman in my work as health officer and the approval of the public generally.

WOODBIDGE—DR. J. W. BARKER, *Health Officer*.

An epidemic of measles occurred in the spring and was very extensive. In some families as many as eight cases occurred. It was impossible to determine the origin, as the disease was general in this part of the state.

I had one case of diphtheria, which was followed by sore throats in the immediate family. The usual quarantine precautions were taken and no secondary cases occurred.

A case of typhoid fever was reported. No other cases followed, and its origin was undetermined.

The draining of two ponds on the Seymour road was reported to me by physicians as well as citizens. The direct result to all living in the vicinity was malaria of a virulent type. I investigated the case, and after the ponds were refilled there has been no further trouble.

It may be proper to mention here something of which, although not of immediate interest to our town, has come to my notice. There is a hennery on the bank of the New Haven Water Company's first reservoir, and a little farther down a dairy farm. Both of these are too near the city water supply.

The school-houses examined (six in number), with few exceptions, were found in a neglected condition, inside and out. However, a small expenditure of time and money would do much to improve it.

In the school buildings (four in number) in which infectious or contagious diseases have occurred among the pupils during the year, a careful disinfection has been made by the sulphur dioxide method.

The general health of the town has been good.

WOODBURY—DR. E. L. SMITH, *Health Officer*.

*Nuisances*.—From date of my appointment as health officer of Woodbury, July 21st, 1896, to Sept. 1st, one nuisance has been investigated on complaint and abated.

*Diseases*.—An epidemic of measles was prevalent in the town from February to June of a mild type, but of wide extent, as no methods of isolation or disinfection were employed.

The number of cases occurring in each month was as follows : February, 79 cases ; March, 125 ; April, 12 ; May, 12 ; and July, 1 case.

Two cases of scarlet fever were reported in May and one in August. Of the two cases of which I have knowledge, one was associated with unsanitary condition of out-house, being in close proximity to the well ; the other with high-colored, foul-smelling cistern water, which was not, however, used for drinking purposes. The methods used to restrict the spread of the disease were isolation of patient and disinfection of room occupied by him by burning sulphur and washing the wood-work with corrosive sublimate solution ; also proper disinfection of clothing worn by patient and attendant.

Whooping cough has been endemic in portions of the town throughout the spring and summer months. No means of restricting its spread have been employed.

Four cases of typhoid fever were reported in September, '95, and one in May, '96.

One case of diphtheria is recorded for December.

Garbage is disposed of by dumping anywhere, at the convenience of individuals.

The disposition of sewage is by privies, cesspools and top-ground drains.

The thirteen school-houses have been inspected and found in good sanitary condition. Outbuildings have been ordered cleaned where necessary, and four school-houses fumigated with sulphur.

The water supply is from the reservoir of the Woodbury Water Company, which is in good sanitary condition, there being no pollution of water by objectionable drainage into it.

WOODSTOCK—DR. JOSEPH SPALDING, *Health Officer*.

This town has been greatly favored during the past year. Two outbreaks of scarlet fever were confined and one of measles, of which no further spread of the disease took place and none proved fatal.

No unusual death rate has been noted. The greatest mortality has been among those of old age.

There has not been any special arrangement for the disposition of garbage. The people, as a rule, are industrious and neat in their habits. They have disposed of discarded substances in ways so that no serious results have been observed.

The school-houses have been, as a rule, cleanly kept.

The water supply is from wells and springs.

Very distressing and almost fatal results occurred to a party of nine persons who partook of vanilla ice-cream. The poisonous effects were not noticeable for twenty to thirty-six hours. There was excessive vomiting, with purging, severe griping pains, excessive headache, high fever, followed by great prostration, with capillary engorgement, so much so that the flesh was a reddish purple cast. The bottle which contained the vanilla had a white line inside at the top of the standing tincture. I am of the opinion that this formation was a poisonous vegetation which, when added to the milk, increased. Then when further warmed by the stomach took on active growth which, after sufficient multiplication, produced the toxic effects which, although very alarming in severity, no one of the number died.

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The Reports of the two following towns were accidentally omitted from their proper place.

AVON—DR. JOHN L. NORTH, *Health Officer*.

Our town has been remarkably free from contagious diseases for the past year, excepting a mild epidemic of measles, in which 19 cases were reported with no deaths, and a few cases of whooping cough. Malaria was very prevalent during the summer months, nearly all cases occurring near a pond or low land, indicating plainly from whence came the infection. There is no public provision in the town for the care of contagious diseases.

I have asked the committee of each school district in the town to thoroughly clean and disinfect all school-houses before the

opening of the fall school term. The location of nearly all our school-houses, with one or two exceptions, is in a sanitary way good, as they are built upon elevated ground, thus providing for good drainage.

The school-houses are all deficient in the proper provision for ventilation, as the only means of ventilation is by the doors and windows. This alone is undoubtedly a very fruitful source of acute throat and lung diseases in our children during the fall and winter months.

The people, as a rule, seem perfectly willing to coöperate with the health officer to improve the sanitary condition of the town. This fact, and the kind assistance of the people with whom I have come in contact in an official way, is much appreciated by me.

Our water supply is largely from wells ; a few families obtaining water from springs.

DANIELSON—MR. W. H. JUDSON, *Health Officer*.

We wish to thank each and every citizen for the promptness with which they have abated nuisances when notified, either by hint or officially.

Without a system of sewerage the place is unusually free from disease, which is no doubt due to the natural drainage, viz., the large layer of sand, some 15 to 20 feet deep, which lies under the more level part of our village, from the soldiers' monument to the rivers. Also our city water (much as it may cost us to use it) is quite free from typhoid germs, coming as it does from a mountain brook, on the line of which is no human habitation, and very few pastures for cattle. May it always be kept so, and thus be our life-preserver.

The health officer deprecates the using of water from wells in the village for drinking purposes, because in a thickly settled place they must of necessity at times contain disease germs.

We have had very little diphtheria, only isolated cases. When you have a diphtheritic sore throat in the family, *always* look about for filth as soon as you look for a physician.

We have had scarlet fever, 13 cases being reported to your health officer, and in every case we could trace the source, which was contact with another case (contagious), and while to these families quarantine has seemed odious, no doubt it has saved us a severe epidemic in the borough.



Of measles we have had so many cases that it has been impossible to enumerate them (a regular epidemic), which for a while reduced the schools to a small working force. This disease is highly contagious and it is almost impossible to stop it when once well started.

We have made only this one rule about attendance at school. When measles enters a household, those children who have had it can go to school; those who have not, must stay at home two weeks, in order that they may see if they are to have it. As to children going to school who have had scarlet fever, or who have lived in the house with the fever, the length of time after the house has been fumigated till they may attend school must be left to the judgment of your health officer, as there is no particular statute or precedent, every officer acting as he thinks best, but in no case have they been allowed to mingle with others in a less time than two or three weeks. Should they live in a house or locality which could be called a nest or starting point for scarlet fever, they should not complain if they were deprived of their school for a longer period. The good of the community and not the individual must be looked after.

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The report for Preston was received too late for insertion in its proper place.

PRESTON—DR. O. F. HARRIS, *Health Officer*.

There has been but little sickness.

Typhoid fever—One case reported.

Scarlet fever—Four or five cases have been reported with two deaths.

Diphtheria—A few cases, *sporadic*, have been reported. They were isolated and disinfected as usual.

There has been considerable chills and fever on the line of the Thames river.

Water supply mainly from wells and springs and one or two small reservoirs.

Drainage, nature takes care of, as the country is very hilly, etc.

Health officer makes sanitary inspections only as complained of, and the citizens extend a helping hand in all cases, responding at once to fulfill requests, etc.



MISCELLANEOUS PAPERS.



## REPORT OF DELEGATE TO NATIONAL CONFERENCE OF STATE BOARDS OF HEALTH.

BY DR. C. A. LINDSLEY.

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In the discharge of his duty as delegate, the undersigned attended the National Conference at Chicago, reaching there on the evening of the 9th of June.

On the morning of the 10th the conference assembled in a large parlor of the Auditorium Hotel. Although the attendance was not so large as on some previous occasions, there were delegates from very remote distances—Mobile, Alabama; Denver, Colorado; Providence, R. I.; San Francisco, Cal. and Toronto, Canada.

The programme called for a three days convention, with three sessions a day. This was partly interrupted by accepting invitations, to visit on Wednesday afternoon, the so-called "Sanitary District of Chicago," by which is meant a great drainage canal, intended to convey all the sewage of Chicago away from Lake Michigan, into which it is now discharged, and deliver it into the Mississippi River; and another invitation for Thursday afternoon to visit the "intakes" of the water supply on Lake Michigan.

On the opening of the meeting on Wednesday morning we were cordially welcomed to the State in a pleasant and appropriate address by Gov. Altgeld. The mayor of the city also gave us a brief address of welcome, to both of which our President made due response.

One of the most interesting discussions related to the production of vaccine virus. It followed the report of Dr. Swartz on several of the more prominent vaccine forms in the country. He had made a personal inspection of a number of them. To some he was refused admission. The chief points of difference among the various producers consisted in the precautions taken to protect the virus from septic contamination; the difference in the age of the animals used for the production of the vaccine virus; the treatment of the animals, both before and after the inoculation; the surface upon which the inoculation was made; the stage of inflammatory progress at which the serum was collected; the mode of collection and of preservation.

These differences were very marked at the different vaccine farms. Some of the differences pertained to particulars respecting which modern science teaches so positively, that it is a matter of much importance from which farm a careful and prudent practitioner obtains the virus he uses.

The report led to a lengthy and very interesting discussion. Much importance was attached by some of the speakers to the use of young animals, as being exempt from tuberculous disease. In some farms a more rigid observance of aseptic precautions was practiced than in others, especially in regard to the persons of the operators.

The comparative value of bovine and humanized virus was fully considered, and the consensus of opinion was, that humanized virus judiciously chosen was in every respect as protective as the bovine and often to be preferred. During epidemics of small-pox, however, the demand for vaccine is always greater than can be supplied from human sources.

Before the conference adjourned, it adopted by an unanimous vote the following resolution :

*Resolved*, That on this, the anniversary of the discovery of vaccination by Jenner, this association gladly commemorates that event by the formal and deliberate statement of its absolute confidence in vaccination with typical humanized or animal lymph, as the only known preventative of small-pox, without which that disease would again attain the proportions of a terrible plague.

The chief subjects for consideration at the second session were the reports on the sanitary work and the progress made, by each of the state boards represented at the conference. As they all have practically the same work to do, it is not surprising to find that the reports showed that the methods of work are essentially alike. Although some have more authority than others, they all act as bureaus of information on sanitary questions. They all seek to diffuse sanitary knowledge among the public through the instrumentality of circulars, on the prevention and restriction of disease, and on the fundamental principles of public hygiene. They all accomplish the most direct and positive results through the agency of the local health officers.

The various state boards are differently organized, but the working force in every state is, and necessarily must be, the local officials. Hence those boards accomplish most in applied sanitary science, which are in the most intimate and harmonious rela-

tions with the town and city health officers of their respective states.

There is also another difference of much importance. Some boards have a much larger amount of money at their disposal than others. For instance Massachusetts, by reason of the liberal appropriation made to its State board, has been enabled to carry on for years a series of scientific observations, in relation to the purification of sewage, determining results of inestimable value to the whole civilized world.

While the routine work of the State boards is essentially similar, the reports indicated that some of them were making special efforts in one direction and some in another. California made an appropriation of 6000 dollars for supplying anti-toxine gratuitously to those who might need it. California holds an annual sanitary convention, which is very well attended by delegates from most of the local health boards in the State. The reporter added the suggestive explanation, that the State board paid the expenses of the delegates. Sanitary conventions are also held in several other states and are always described as being very interesting and profitable.

A number of the State boards are making efforts more or less active to restrict the spread of consumption. Michigan requires all her local health officers to report all the cases that come to their knowledge.

Illinois proposes a school law of the State, requiring every applicant for a teacher's certificate to be examined physically for any tendency to tuberculosis, and also to prohibit kissing in the public schools.

In California it is proposed to refuse certificates to practice to medical men who have emigrated to that State, suffering with tuberculosis.

By an act of 1893 the Ohio State board was charged with the duty of approving all public water supplies, and all systems of sewerage, with respect to their outlets, introduced subsequent to that time. New York and Massachusetts are the only other State boards having authority to protect the water supplies from dangerous contaminations, and enforce suitable disposal of sewage.

New Jersey has begun a systematic inspection of dairies through the State. They examine the dairies as to the condition of the animals and the milk, the way the premises are kept, the habits of the people on the premises, and also as to the washing



of the cans. Reports of the inspections are sent to the consumers of the milk. New Jersey has also laboratories for the free examination of specimens.

Pennsylvania provides free bacteriological examination for all local boards of health.

Michigan in 1895 enacted a law which requires that there shall be taught in every year, in every public school in Michigan, the principal modes by which each of the dangerous communicable diseases is spread and the best methods for the restriction and prevention of each such disease.

The following question elicited an interesting discussion :

Does not sanitary science provide sufficient knowledge and skill to transport a corpse dead of any disease in such manner as to be safe to the public ?

Dr. Hewett of Minn. opened the debate and said,—it was unreasonable to refuse the transportation of any diseased body because of danger of infection. That the entire destruction of every infective disease germ was not only practicable, but of easy accomplishment.

This opinion was readily assented to, but that in practice, safety was only acquired when the disinfection was performed by experts. That as a general rule the undertakers who usually performed the duty were not always experts, and that complete disinfection could not be depended upon, until undertakers were trained and required to take out a license after an examination.

The discussion of "How to obtain the vital statistics of a State" developed a wide variety of methods, and great differences in the legal requirements, in different states. It also brought out an unanimous expression of the difficulty of obtaining a complete records of births, marriages and deaths—completeness as to numbers and also as to the special facts desirable in each record.

The difficulty did not appear to be due to defects in the laws. They were sufficiently intelligible and full in their requirements. The secret of success lies in providing for their enforcement. Full registration of vital statistics in a state is impossible except by the almost daily observance of the details of laws relating to it, by a large body of citizens, in different pursuits ; each doing his own part of the work accurately and promptly. Everywhere, the registration laws impose a duty upon physicians, midwives, parents, undertakers, clergymen, justices of the peace, and other

officials authorized to perform the marriage ceremony, and registrars. In every state in the Union in which a record of vital statistics has been attempted, it is the universal experience that the faithful observance of the requirements necessary to a satisfactory record, has never been attained. The effort has been tested so long and so fairly, as to prove that other means must be taken to accomplish what is desired. Of all the laws now in force these are least likely to be automatic in their operation. Nothing but the stimulus of authoritative official prompting, assiduously and rigorously applied, will secure full registration. Connecticut has come nearer to solving the difficulty than any other state. It is the only State in which it is made one of the functions of a special officer to enforce the registration laws.

The practice was not entered upon abruptly and rigidly, but by steady and gradual advances ; all parties concerned have been notified of their duties and induced to do them. Very few prosecutions have been necessary. An occasional reminder to a delinquent has secured so uniform an observance of the laws, that it is undoubtedly true that for the year 1896 no other State in the Union will have so perfect a record of the births, marriages and deaths among its people, as the State of Connecticut.

Your delegate had the pleasure of explaining the Connecticut system to the members of the conference, which awakened an inquisitive interest in the plan.

Various other papers were submitted to the conference, but for lack of time to hear and discuss them they were mostly read by title. They will appear in the published proceedings of the conference.

REPORT OF DELEGATES TO AMERICAN PUBLIC  
HEALTH ASSOCIATION.

BY DR. N. E. WORDIN.

The annual meeting of the American Public Health Association assembled in Buffalo, beginning September 15 and continuing through Friday the 18th. While the attendance was not so good as at previous gatherings, the results were greater in number of papers read and work done. Buffalo, having several miles of asphalt streets, was a revelation of how clean a city can be made, and Ellicott Square was well adapted for a place of meeting and for exhibits, of which there were many. The Connecticut Board of Health was well represented, Buffalo being so near. Col. Woodhull, U. S. A., of Denver, presided with dignity over all the sessions, as the President, Dr. Liceaga, of Mexico, did not sufficiently understand the English language.

At the opening meeting, Tuesday morning, Prof. Stephen Smith, of New York, the first President, gave a very interesting address on the early history of the association, its organization and its methods of transacting business. The first paper read was a report of the committee on car sanitation, by Dr. G. P. Conn, President of the State Board of Health of New Hampshire. Some of the suggestions made for improving the condition of railroad cars were, first, to place car sanitation, as a separate department of railroad management, under the supervision of the Surgeon of the road, and under the advice of the motive power department: second, opening and airing the cars, as is done in the bed-rooms of our houses; third, abolishing urinals and substituting dry hoppers with closely fitting lids which will ventilate themselves by the movement of the train; fourth, by instructing the train men in all the duties pertaining to the cleaning of cars and keeping them in proper condition.

Dr. Kennedy, Secretary of the State Board of Health of Iowa, presented an interesting paper on the Composition and Infectiousness of Milk. Among other things he said were these: A large proportion of deaths is among artificially-fed children. One cause of this is that the milk is diluted and thus deprived of its nutrition. The result is inanition and starvation. To thus dilute milk, is a crime. In many states there are dairy laws against it

and in many cases they are effectual. He emphasized and intensified the importance of a sanitary inspection of all milk. A mere commercial examination is not sufficient. There should also be an examination of the cattle, their food, their stables, the family condition of the farmer, and the water supply with which the cans are washed. The first thing of importance is to determine whether the animal furnishing the milk is healthy or not. A report from Washington gives a list of diseases in the cow which render the milk injurious if not dangerous—gastroenteric diseases, enteritis, puerperal and other septic fevers, foot and mouth disease, pleuropneumonia, and tuberculosis. Tuberculosis is very prevalent in cattle. Avarice tries to conceal its presence. It prevails in cattle all over the globe, in varied frequency; in Mexico, 34 per cent.; in France, 5 out of a thousand; England, 1 to 26 per cent.; Belgium, 4 per cent.; Massachusetts, 18 per cent.

Dr. Ernst sent out circulars of inquiry to 1800 physicians to determine if there was danger from using the milk of diseased animals. The result was that, in their opinion, such milk should be avoided. Dr. Woodhead says that in children, at least, general tuberculosis infection is in very many cases to be traced to infected milk. Professor Vaughan has a record of 138 epidemics of typhoid fever traceable to a specific pollution of the milk, 74 of scarlet fever, and 2 of diphtheria. The germs get into the milk at milking time, from the sides of the cow, the pail, the hands of the milker, from dirty udders, from the water added after the milk leaves the dairy, and from the careless habits of the family where it is used. The only remedy is inspection, cleanliness, sterilization. All cattle should be inspected and the diseased ones condemned. Cleanliness of animals, of persons and surroundings should be enforced. The terrible results from using infected milk should be taught in families and in the schools. Those receiving the milk should sterilize it. But as this requires a thermometer, the best test of the proper heat is boiling. Put the milk in tightly corked bottles filled within two inches of the top, immerse these bottles in water, boil, and cool before removal. This is a simple process, can be practised in any home and renders the milk practically free from danger because of germs. Professor Jacobi declares that the danger diminishes with the number of boilings.

Dr. Swarts, of the Rhode Island Board of Health, in discussion of the subject said that "cleanliness was the principal thing.



The contamination of the milk comes from the hide and udders. Tubercular meningitis and enteritis are too frequent to be explained on the ground of heredity. They are due to milk and can be eradicated. Every one should take an interest in these things: it should not be left to health officers and physicians. How can the pollution of milk be remedied? At one farm in Buffalo, the purity of the milk is certified to. In Caldwell, N. J., milk was produced under bonds that persons producing and selling it should first get it in sterilized pails of approved pattern, should sterilize the udders of the cows and should cork up the milk in sterilized bottles. This can be carried out in any city or state, if the health officers will take it up. But sterilized milk, continually used, produces rachitis and degenerative diseases. Therefore it is better to produce milk which does not require sterilization and it can be done by the method I have described."

Dr. Lee, of Philadelphia, expressed the same thought.

Dr. Barber, of Des Moines, declared there is nothing the child takes which is so filthy as milk. He has made investigations and has found filthy cows, filthy stables, filthy surroundings and filthy milkers. It is time that something should be done.

An important paper was that by Mrs. Ellen Richards, of the Institute of Technology, Boston, on Municipal Responsibility for Healthy School-houses. The law protects the weak—the children, women and wage-earners. Hence there are various laws regulating employers in occupations classed as dangerous. The state holds the employer responsible and most employers find it better to comply with the law. The same conditions which require a certain amount of air to those working in a mine, should apply to those compelled to be in school. Ownership and compulsion on the part of the state demand this. If a broken bridge or a bad road causes a disaster the town is held responsible. Taxpayers must provide buildings and city officials must be held responsible. School-houses should come under the law. In Boston, one-half the school-houses were found deleterious to health. Inspectors found 5033 cases of throat diseases in children. The death-rate of teachers in Boston is greater than that in other cities. Yet Boston is not more lax than other cities in observing its responsibilities. Of 186 school-houses examined, only 16 had modern ventilation. The floors of 90 per cent. had never been washed. The Mayor of Boston has said there is no



duty greater than to provide conveniences for the scholars. Public sentiment should arouse to keep its property in good condition. If it does not, close the buildings which are unfit. If this should be done, 20,000 children would be on the street next September because of the violation of both moral and civic law. Twenty-seven out of 80 school-houses had fire-escapes. Operatives would not work under such conditions. The work of teaching is a dangerous occupation. In case of accident or death the city should be held responsible just as if the harm came from a broken bridge.

On Wednesday morning came the report of the committee on the Disposal of Garbage and Refuse, Rudolph Hering chairman. Certain points of interest and value were given. The economic question must be considered a secondary one. The health of those who work in garbage is found not to be injured thereby. The committee had replies from 140 cities out of 183 written to. Nine per cent. of these have private collection of garbage by private parties; 13 per cent. do it by contract. In 12 cities the garbage is used as fertilizer, 42 have cremation. The cost of collection varies so as to make figures of not much value until they can be more fully classified. It varies with the size of the city and the method of disposal. From a sanitary point of view, cremation is the only reliable method of disposal. In Europe reduction is discarded, burning adopted. This is valuable in epidemics. The questionable value of the fertilizer should not weigh against the sanitary consideration. The question of garbage disposal can not be considered as finally settled in view of experiments which are to be made in Berlin and Hamburg.

A paper was read by Dr. N. E. Wordin, entitled A Plea for the Domestic Disposal of Garbage, and an interesting discussion followed.

Surgeon General Sternberg said he was in favor of disposing of garbage at once and in the house. The bad odor from the swill-pail doesn't make people sick, but the house-fly may carry infectious material. A platinum needle introduced into the culture fluid carries thousands of germs. So does the proboscis of the fly when put into the garbage. Typhoid fever is carried in this way. So, we may believe, was cholera, from quarantine to various parts of New York City during the last prevalence there. Dr. Durgin, of Boston said: "All these papers drive us to the conclusion that waste should be divided into two parts, one, general

garbage of the city, the other, the waste of the household. The latter is the worst. It must go through fire. The furnaces should be in different parts of the city. There will be a more or less surreptitious disposal in water and land. It belongs to the household to dispose of its own household garbage. That is the only sanitary and sensible method. To ask the city to get it is an imposition. To leave it to be offensive is an imposition."

Professor Franklin C. Robinson, of the State Board of Health of Maine, gave the results of some experiments which have been made during the past year under the direction of the Maine State Board of Health.

Formaldehyde is a powerful disinfectant. It is gaseous in form and the only efficient gaseous disinfectant we have. Sulphur has been given up by many state boards of health. That of Maine has withdrawn its indorsement. But the difficulty is in obtaining the gas in sufficiently large quantities. It must have a large volume in a short time, to be efficient. It has a remarkable penetrating quality. Its specific gravity is about the same as air. It penetrates rapidly and must therefore be developed rapidly. He had tried to make an apparatus to put into the hands of the boards of health of Maine. He has a lamp which will change one litre in an hour. The room must be flooded. Experiments were made in loose and close rooms. The penetrating power of the gas allows it to escape when sulphur would not. The essential is a large quantity in a short time. In a room 12x20x13, one litre of wood alcohol burned in an hour will sterilize completely. Cultures have been placed in the interior of mattresses. But to destroy these requires one litre and a half. Cultures buried in the sand half an inch are destroyed.

Dr. J. J. Kinyoun, in discussing the subject of formaldehyde, said that experiments had been undertaken by the government to see if cars could not be disinfected without loss of time. This gas has been known for some time as a disinfectant. Formalin and formalose are in the market at one dollar per pound. Formalin contains 39 to 41 per cent. of the gas, formalose, 30 to 40. It is therefore too expensive. Germs of cholera, typhoid fever, diphtheria, tubercle, erysipelas, have all been tested and found to have been killed. Is formaldehyde injurious to fabrics? It has been tried on wool, silk, hair, feathers, etc. Only two silks changed color and they were reds. No article was affected in strength. In the application of a disinfectant evaporation in ves-

sels is not satisfactory. Neither is boiling in retorts and throwing the vapor into apartments. With spraying it is the same. The germicide reaches only where it is thrown. There is lack of penetration. With formaldehyde, on the contrary, it depends upon the percentage of gas and the time of exposure. From a quarter to a half of one per cent. for twenty-four hours is sufficient for surface exposure. For a railroad car, one quarter to three quarters of one per cent. Among the trials made at the government laboratories were these: cultures were put in an envelope in ten or twelve layers of blankets, to simulate hangings. Three thicknesses of cloth, were tied in a bag. Cultures were put in thirty or forty layers of cotton sheeting and in books. With a two per cent. mixture the results were discordant, after forty-eight hours. When the cultures were in loose bags they were always killed. The diphtheria germ has the least resistance and was always killed. Tuberculosis has the next least resistance. Formaldehyde clings to articles and must be neutralized. This can be done with ammonia. Moisture militates against its effects.

The committee on the Cause and Prevention of Diphtheria reported through its chairman, Dr. J. J. Kinyoun of the United States Hospital Marine Service. It has been satisfactorily demonstrated, he said, that many inflammations of the mucous membrane which are not accompanied by the diphtheritic membrane are nevertheless caused by the diphtheritic germ. Membranous croup has been demonstrated to be laryngeal diphtheria, in nine-tenths of the cases. Many cities have established laboratories giving facilities for examination, but examinations have not been compulsory. The death-rate from croup, where examinations have not been made, has been high. Where the diagnosis has been made from culture tests, croup has diminished and diphtheria increased. Diphtheria is a disease of closely inhabited regions—a disease disseminated chiefly by contact, indirectly by and always aided by unsanitary conditions. Railroad and other passenger traffic undoubtedly plays a large part in its extension. An early diagnosis is desirable. A culture test is absolutely necessary, to be certain. If these means are applied, the disease will be infrequent. Early notification, isolation, private funerals, are important.

Cases which have bacilli in the throat should be treated as diphtheria.

Prophylaxis - There is sufficient evidence to show the value of antitoxin.

Where it is used the mortality is 10.6, whereas before its introduction it was 39.6.

The committee recommends uniform rules in all states, for the prevention and control of diphtheria. It is the duty of all health officers to provide laboratories and other means for diagnosis. There should be compulsory notification of cases and all classification of croup and membranous croup should be abolished. Patients should be isolated until the bacilli have disappeared. There should be daily inspection of school-children in cities. School buildings, books, etc., should be inspected every month.

A paper was read on the question of quarantining measles. It brought out a lively discussion, the prevailing sentiment being that it was not wise to adopt the plan in this disease.

Only practical points of use in our own state have been given in this resume.

Much social enjoyment was furnished the delegates by the local committee of the association, so that both pleasure and profit were happily combined.



## REPORT OF AN EPIDEMIC OF TYPHOID FEVER.

BY DR. F. W. WRIGHT,

*Health Officer of New Haven.**Dr. C. A. Lindsley, Secretary State Board of Health :*

DEAR SIR :—In answer to your request I submit the following history of the recent typhoid fever outbreak in the fourth ward of the City of New Haven. This outbreak was limited to a very circumscribed area, with Trowbridge Square as a center; a radius of one-half mile would cover the territory affected. Occasionally, cases of typhoid fever had been reported in this district for a week or ten days previous to August 20, and at this date there had been nine cases reported. About this date the number reported daily was greatly increased. A thorough investigation of every case as to water, ice and milk supply, and also as to sanitary condition of the premises was instituted. This soon revealed the fact that many of those sick had been using milk from the same dealer. It was not an easy matter to find the milk supply of all, many not even knowing from whom they bought their milk.

By persistent inquiry we were enabled to account for many cases that at first seemed a mystery. As soon as there was any evidence that there was any connection between the typhoid fever cases and this dealer's milk, I at once visited his place.

This milk dealer, whom for convenience we will call M—, boarded in the family of A—. He obtained his milk from three or four farms, but the larger part was supplied from a farm managed by B—. At A—'s I found that four members of the family had been sick with so-called malaria, lasting several weeks and that in several instances diarrhœa had accompanied the fever. In addition, B—, Jr., a son of the farmer B—, boarded in the family of A—. He had also been sick with malaria for four weeks. This man had not been confined to his bed and had been, as he stated with emphasis, able to milk twice a day.

Across the street from A—'s lived B— with two young sons. One of these sons had been complaining of malaria and the other was, at the time of my visit, sick with a typical case of typhoid fever. This latter boy had been in the habit of washing the milk cans for M—.



At A—'s the family washing was done in the basement and the dirty water was thrown from the back of the house in the immediate vicinity of the well. An examination of the water showed that it was unfit for human consumption.

M— not only boarded at A—'s but also kept his teams in the barn upon the premises. Up to August 1, the milk cans had been washed in this barn and with water from this well, but after this time the washing had been done in B—'s barn, but the hot water was brought from A—'s and this M— acknowledged was not always boiled.

From August 8 to September 16, sixty-two cases of typhoid fever was reported to the Board of Health as occurring in the district before described. I have good reason to believe there were many cases not reported, either from an uncertainty as to diagnosis or for other reasons. I have also indirectly learned at different times of a considerable number of persons who have visited this city, used this milk, and returned home to be stricken with typhoid fever. Others, residents of this city, have been taken with the disease while absent from home.

Of the sixty-two cases of typhoid fever reported, our investigations showed clearly that fifty-two used regularly or occasionally milk purchased directly from M— or from stores supplied by him. Of the other cases, three were without doubt contracted away from this city, leaving only seven unaccounted for.

On August 30, Mr. M— moved from A—'s, scalded his cans with boiling water, changed his place of storing milk, and used water for washing cans from an entirely different source, and stopped using milk from B—'s farm. From August 30 to September 7, twenty-three cases of typhoid fever were reported; no more until September 12, when there was one case reported. There was also one case September 14 and another September 16. From that date to October 1, not another case was reported from that vicinity. Since October 1, there has occasionally been a separated case of this disease, but investigation has not shown the origin of it. Possibly they were secondary to some of the earlier ones.

Yours,

FRANK W. WRIGHT, M.D.,

*Health Officer of New Haven.*

OUTBREAK OF TYPHOID FEVER SUPPOSED TO  
ORIGINATE AT SACHEM'S HEAD.

*Dr. C. A. Lindsley, Secretary State Board of Health.*

DEAR DOCTOR—During September two cases of typhoid fever, one of which proved fatal, have been reported to this Board. Investigation showed that in both cases the family had just returned from Sachem's Head, Conn., and I am informed that several others have returned ill with the same disease to other towns.

I report this fact to you and suggest the desirability of investigation for the boarding house or hotel at that point.

I am unable to give the name of the proprietor, but am informed that there is only one boarding house at the point and that well water is used.

Very truly yours,

EDWARD K. ROOT, M.D.,

*Medical Inspector.*

YALE MEDICAL SCHOOL, NEW HAVEN, CONN., }  
January 14th, 1897. }

*C. A. Lindsley, M.D., Sec. Conn. State Board of Health.*

MY DEAR SIR—As requested by you, I visited Sachem's Head early in October with the view of ascertaining if possible what source of typhoid fever infection might have existed during the summer at the boarding house referred to by Dr. Root.

I inspected the premises and interviewed the proprietors and others connected with the house, making inquiry especially as to the milk and water supply, and as to the number and residences of those who had boarded there during the summer. I also corresponded with Dr. E. K. Root of Hartford and Dr. R. B. West of Guilford concerning the cases.

The house is a small summer boarding house having accommodations for only a few roomers, but having accommodated during the summer a considerable number of table boarders who roomed elsewhere. A complete register of the boarders was not kept, so it was impossible to obtain a full list of them, but the names of about forty were obtained. The entire number at the house during the summer could not be ascertained, but it was considerably in excess of one hundred. The only cases of illness occurring at the house of a character which made them interesting in this

inquiry were two, the hired man and a waiter girl; both were ill during the last two weeks of August. Concerning them the attending physician writes, "Neither of them had typhoid fever." "The man was ill with typho-malarial fever." Blood examinations showed the malarial plasmodium, and Ehrlich's test gave negative results with the urine. His condition rapidly improved under treatment with quinine. "The girl showed the usual malarial manifestations developing into dysentery." She was in bed two weeks.

Among the whole number of boarders I have been unable to discover any other cases of typhoid fever than the three occurring in Hartford, one in one family and two in another. The first case was that of a person who was at Sachem's Head for two weeks, leaving on August 25th, and was reported as ill with typhoid fever in Hartford on September 22d, though the case had then probably existed several days. The second family was also at Sachem's Head for two weeks, leaving on August 31st. The first of the two cases came home feeling ill and was treated a few days for malarial fever, but then it was diagnosed as typhoid fever and so reported on September 21st. The second case had also felt unwell shortly after his return, but did not develop typhoid symptoms until October 1st. It would seem that this third case might have been one of secondary infection. The other two, however, probably received the infection during their stay at Sachem's Head in the last two weeks of August, which was also the time during which the two cases already referred to were ill at the boarding house.

As a result of the inspection of the house the only thing worthy of notice related to the water supply. The water usually supplied on the table was drawn from a well some distance from the house. It was on low ground and the water was said to be brackish, but there was no obvious way by which it could become infected through typhoid discharges. There was another well situated near the door of the house, water from which was sometimes used on the table, and it was used at other times by the boarders. This well was about sixteen feet deep and blasted in rock; an open-jointed tile drain passed within six feet of the well; the drain coming from the kitchen sink. No analyses of the water were made because it seemed certain from the existing conditions and from what was said about the character of the water, that it received more or less of this sink drainage, and

because at the time of my visit it was too late to expect to find specific infection if it had existed.

Against the theory that the cases existing during the last of August at the boarding house were typhoid fever, and that the cases which subsequently developed received their infection from them, it is to be urged that this is contrary to the diagnosis of the physician in charge, and also that the number of those who must have been exposed was considerable, while as far as known only two or possibly three cases developed.

The facts do not suggest any other explanation ; therefore I would report that while the presumption is strong that the Hartford cases originated at Sachem's Head, and while in my opinion the sanitary conditions at the boarding house were not good, I am unable to decide definitely that the cases did originate there.

Yours truly,

DR. H. E. SMITH.



## REPORT OF AN INSPECTION OF CAMP COFFIN.

The undersigned, members of the State Board of Health, visited Camp Coffin at Niantic, on the 20th day of August, 1896, to make an inspection of the encampment.

We were cordially received by the medical director, Lieut.-Col. Almy, who courteously escorted us about the camp, putting a conveyance at our disposal.

We found at the hospital, which we visited first, only three persons sick. Their ailments were of a slight and unimportant nature. A few cases of mild diarrhœa among the soldiers of the camp were reported; but they were evidently due to the change in food and drinking water, rather than to any local unsanitary condition.

The hospital was located in a quiet, healthful part of the grounds, somewhat distant from the kitchens, stables and soldiers' quarters. Its facilities for the care of the sick and for the isolation of contagious cases, were ample and satisfactory.

We next inspected the privy sinks and urinals, which we found were receiving the proper amount of care and attention. The fecal accumulations were covered with a sprinkling of dry earth, often enough to prevent unpleasant odors. The urinals, though they had been frequently flushed with a strong solution of cop-peras, were not without an offensive odor. It seemed to us desirable that some simple means should be devised, if possible, for the more effectual abolition of this odor.

We would suggest that the earth provided for use in the privy sinks be kept in a dry state, *under cover*. Otherwise, a sudden rain might convert it into liquid mud, which would be of little value as a disinfectant or deodorant.

A feature which we found worthy of commendation was the systematic disposal of the kitchen refuse, which was regularly collected and promptly buried in a succession of pits outside of the guard line. The police service was also notably efficient.

The ice supply for the camp was obtained from the Niantic Ice Co., whose ice comes from a series of fresh water ponds in that vicinity. We were informed that care had been taken, this year, to secure ice from one particular pond which was believed to be less exposed to the danger of pollution than were some of the other ponds from which the supply for the camp was furnished last year.



We found that the milk supply was from a large number of dairies scattered over the neighboring country. The commissary sergeant was detailed to inspect it, daily. But no thorough scientific examination of it was attempted at the camp, without which there could be no positive assurance of its fitness for use in the absence of any general state regulations for the inspection of milk or the sources of its supply.

The fact that some of the severest epidemics of typhoid fever in Connecticut have come from the use of infected milk, suggests, as a preventive measure in the future, that a careful inspection be made of the sanitary condition of the dairies, and absolute cleanliness insisted upon of all the sources from which the milk supply for the camp is obtained. We recommend that this be done under the direction of the proper military authority, and that milk be admitted into the camp only by those persons whose dairies and cows have been so examined, and to whom proper licenses have been granted therefor.

The soldiers' quarters, the commissary's department, the kitchens and the stables were next inspected, and were found to be in a well-ordered, neat and cleanly condition.

The many large ice boxes in which were kept the meat and other food supplies, presented also a wholesome and inviting appearance.

The last thing which we examined in our tour of inspection was the water supply. A report had just been made by Prof. Herbert E. Smith, of a chemical and bacteriological examination of the drinking water, in which no evidence of pollution was found.

The water was supplied by a row of driven wells stretching across the camp ground. Each well was provided with a pump situated either at the surface of the ground or else at the bottom of an excavation about eight feet deep. Each pump discharged the water through a wooden pipe into a tub located about twelve feet from the well. The waste water in each tub was used by the soldiers, not only for ablutions of their hands and faces but also to some extent for washing their clothing. It was allowed to overflow into a shallow excavation filled with cobble stones and located about fifteen feet from the driven well. This arrangement was considered an improvement on the former plan, which allowed the waste water to drip back more immediately and without filtration into the well.

Last year, it was ascertained that a soldier washed, in one of

the tubs, a garment which he had accidentally defiled by defecation, while suffering with a diarrhœa. The possibility of the pollution of the drinking water from such a dangerous source, leads us to endorse and repeat the recommendation submitted last year by Dr. C. A. Lindsley and Mr. T. H. McKenzie, of the State Board of Health, that "water-tight drain pipes be laid from each well to carry off all the polluted water from the camp ground."

In conclusion, it gives us pleasure to state that we were courteously met by Surgeon-General George A. Bowen, who gave us much valuable information concerning the organization and sanitary supervision of the camp.

Respectfully submitted,

RALPH S. GOODWIN,  
N. E. WORDIN.

## REPORT OF EXAMINATION OF THE WATER SUPPLY AT CAMP COFFIN.

*C. A. Lindsley, M.D., Sec. Conn. State Board of Health.*

MY DEAR SIR—The following is a statement of the results of the examination of the water from well No. 1, at the Niantic camp ground, which was taken on August 10th.

	Residue on Evaporation.	Parts per Million.
Total .....		63.5
Volatile .....		7.5
Chlorine, combined .....		11.5
Nitrogen of Free Ammonia .....		.008
“ Albuminoid Ammonia .....		.014
“ Nitrites .....		.002
“ Nitrates .....		3.25
Oxygen consumed from Permanganate in $\frac{1}{2}$ h. 100° C. ....		.1
Hardness, as Carbonate of Calcium .....		19.

This sample was taken before the last annual encampment, and as a result of the examination I reported that, in my opinion, the water was in a satisfactory condition to use.

At the conclusion of the encampment a sample was taken from each of the twenty-nine wells on the ground and examinations were made of these samples of such points as it seemed would give us the best data for judging whether the wells had become contaminated as a result of the encampment. These results are given below:

No.	Chlorine.	Nitrogen of Nitrites.	Nitrogen of Nitrates.	Oxygen Consumed.
1.	13.5	0.050	1.75	0.50
2.	11.0	.001	.75	.80
3.	13.5	.000	.60	.25
4.	9.5	.000	.30	.20
5.	10.5	.000	.38	.65
6.	14.5	.000	.05	.70
7.	14.0	.000	.62	.25
8.	9.0	.000	1.00	.15
9.	14.0	.000	.38	.25
10.	12.5	.000	.60	.15
11.	9.5	.001	.38	.20
12.	10.5	.000	.25	.20

No.	Chlorine.	Nitrogen of Nitrites.	Nitrogen of Nitrates.	Oxygen Consumed.
13.	9.5	.000	.45	.95
14.	10.5	.000	2.25	1.00
15.	81.0	.001	.40	.30
16,	17.5	.000	3.50	.15
17.	12.5	.005	.80	.05
18.	11.5	.000	.45	.15
19.	10.5	.007	1.00	.05
20.	57.5	.004	1.20	.80
21.	33.5	.002	1.13	.25
22.	19.5	.001	1.15	.80
23.	9.5	.000	.35	.15
24.	14.5	.003	.75	.15
25.	13.0	.001	.63	.20
26.	9.5	.000	.13	.15
27.	17.0	.000	.25	.20
28.	10.0	.000	.25	.25
29.	10.5	.000	.45	1.00

It would appear that the normal amount of chlorine was in the neighborhood of from 10 to 12 parts per million ; a few wells, however, are seen to deviate widely from this amount. The ones showing this deviation especially are numbers 15, 16, 20, 21 and 22. By a study of the location of these wells as shown on the camp map, it is seen that these are all located near the mess houses. What special source of contamination existed about these wells I do not as yet know I should judge, however, that it would be wise to make an examination with regard to this point before the next encampment. Wells Nos. 1 to 14 inclusive, which are in the street along which the tents are pitched, do not show, as far as I can judge from these examinations, any contamination as the result of the encampment.

Yours truly,

HERBERT E. SMITH.

## A REPORT ON A POSSIBLE CONTAMINATION OF ICE, IN A POND IN PLYMOUTH.

SEPT. 4, 1896.

By request of the Health Officer of Plymouth, Dr. Ferguson, I visited with him an artificial pond in Plymouth, situated near the residence of Mr. Walter Bemis. The said pond is a water power supply for the Eagle Lock Company.

The liability to contamination is chiefly from three sources, viz: a barn, a privy and the kitchen sewage; these being located on the side or at the top of a steep bank, bordering upon the pond, all the drainage is necessarily directly toward it.

The privy is about sixty feet distant from the edge of the pond; the barn yard is somewhat less, and the sink spout from the kitchen may be over a hundred feet away. There are also two poultry yards, containing a considerable number of fowls, on the hill side near the pond. The privy has no vault under it and the deposits may be readily floated by heavy rains directly into the water, at the foot of the bank, upon the side of which it stands.

There can be no doubt that a large amount of sewage from these sources is carried, in time of heavy rainfalls, into the water. It follows without saying that water so polluted is not a suitable source of ice supply for ordinary domestic uses.

All of which is respectfully submitted,

C. A. LINDSLEY, }	<i>Members of the</i>
R. S. GOODWIN. }	<i>State Board of Health.</i>



## THE INFECTIOUSNESS OF MILK.\*

BY J. F. KENNEDY, A.M., M.D.,

*Secretary State Board of Health of Iowa.*

Pure, uncontaminated cows' milk contains, in practically proper proportions, all the elements of a perfect food. Human milk, its closest analogue, is the only food prepared by nature for the most critical period of human life; and for nine to ten months all the marvelous developments of infancy are best promoted by the sole use of breast milk.

In adults, milk alone will sustain life longer than any known food. Drs. Coplin and Bevan, in their excellent "Manual of Practical Hygiene," say: "The writers are aware of a patient who lived three years upon three to five pints of milk daily, and a patient in the hospital of the Jefferson Medical College, suffering from carcinoma of the gullet, received three pints of milk daily, and gained considerable weight and strength during the period of thirteen months."

The quantity of milk used in the United States annually, either in its original form or its products, butter and cheese, is enormous, and attests its importance as an article of food. Especially is it important because of the large number of infants who are artificially fed, and whose sole dependance for life itself is upon milk.

It is said that during the year 1895, in England and Wales, one fifth of the total deaths were children under one year old, and it has been shown that of this frightful mortality much the greater proportion were artificially-fed children.

In Berlin, in giving the certificates of deaths of children under one year, the fact must be stated as to whether the child was fed from the breast or brought up artificially. In ten thousand deaths thus reported it was found that two-thirds, or 7,646, were artificially fed.

Hope, in a series of investigations in England, discovered that only 3 per cent. of one thousand deaths occurred in infants that were breast-fed; and Minert of Bavaria found in a similar inves-

\* An abstract of a paper presented to the American Public Health Association, at the Buffalo meeting, Sept. 15-18, 1896.

tigation that, out of four hundred deaths of children from summer diarrhœa that came under his notice, 96 per cent. were fed artificially.

In view of these facts it is pertinent, therefore, to inquire whence come such direful results from the use of an article of food so well adapted by nature, in its normal condition, to the growth and development of the body?

The cause of quite a large number of deaths of these children artificially fed is inanition, the milk having been largely deprived of its nutritious properties by the addition of water, in many places commercial milk being diluted from 25 to 30 per cent.

This dilution is not only a fraud upon the buyer, but a great crime perpetrated upon the innocent child, who needs the milk, with its rich per cent. of butter-fat, as secreted by the udder, in order that it may grow and develop. If deprived of this essential element, instead of thus growing, the muscles become flaccid, the features haggard and pale, and, finally, literal starvation occurs.

Many states now have dairy laws which are intended to protect the people against this fraud of adulteration, and in some places the law is measurably successful. Even where there is a rigid and apparently efficient inspection of milk, however, and the butter-fat is up to the per cent. prescribed, the inspection is not expected to reach further. The commercial rather than the sanitary interests of the consumer are guarded.

The design of this paper is to emphasize and intensify the importance of a sanitary inspection in addition to, if not to the exclusion of, the mere commercial examination. Indeed, a faithful sanitary inspection must of necessity exclude all adulterants, whether for the purpose of increasing the bulk or changing the quality of the milk.

But little effort has yet been made to determine the condition of the cattle giving the milk, whether healthy and free from any infectious disease; to examine the feed and water given the cows; the sanitary condition of the stables; the character of the water used for washing the cans, if not for diluting the milk; the sanitary condition of the milkman's family, and whether they have any infectious diseases; and the habits of those handling the milk, and the methods used in milking. All these are important conditions, which contribute greatly to the healthfulness or infectiousness of the milk.

The first thing of importance is to determine whether the animal furnishing the milk is healthy or not. If a corrupt fountain cannot send forth pure water, neither can a diseased cow secrete and furnish pure and wholesome milk.

An interesting report prepared by S. C. Busey, M.D., and G. M. Kober, M.D., of Washington, D.C., has recently been published by the health officer of the District of Columbia, for 1895, on "Morbific and Infectious Milk." The authors point out certain diseases of cows that affect the milk deleteriously, if not dangerously. Among those diseases which render the milk unfit for food, they cite the following affections: *Garget*, and inflammatory condition of the udder and teats; *gastro-enteric diseases*; *acute specific enteritis*; *puerperal and other septic fevers*; *foot and mouth disease*; *cowpox*; *anthrax*; *pleuro-pneumonia*; *rabies*; *tetanus*; and *tuberculosis*.

They proceed in their report to furnish ample proof of the infectious character of milk from cows affected with the foregoing diseases, and show that often loathsome and fatal sickness has arisen because of the use of milk thus infected.

It is said that about one-seventh of all the deaths occurring in the world are from tuberculosis, and that it has been universally conceded that tuberculosis in man and cattle is identical. It is important to know to what extent this disease prevails among cattle. It is fair to assume that it is much more frequent than is believed. Avarice and commercial greed combine to secrete and minify the prevalence of the disease, and to weaken or prevent belief in the infectiousness of the milk and meat of such animals.

Despite this disposition to conceal the extent to which this disease prevails, veterinarians and commissions are diligently and successfully turning on the search-light of investigation, and already some interesting facts have been discovered.

Fleming says: "Tubercular phthisis, or tuberculosis, probably prevails among domesticated animals over the entire globe, though its frequency will depend upon various external influences, as well as the constitutional tendencies of different species and breeds. In some countries it is enzoötic and very destructive. In Mexico, for instance, it is very common and causes much loss, about 34 per cent. of the animals slaughtered for food being found affected.

In France, M. Arloing estimates that among the adult bovine animals five out of every one thousand are tuberculous. The

proportion in England, according to Mr. Cope, is from 1 to 26 per cent., depending upon the locality. In Belgium the estimate is 4 per cent. In Holland the proportion given varies from 8.4 to 10.6 per thousand.

Dr. Winchester reported to the Massachusetts Cattle Commission that during 1887 and 1888, he had learned of thirty-four herds of cattle in which tuberculosis was actually demonstrated by post-mortem examinations. These herds contained 866 cattle. Of these, 243, or 28 per cent., were pronounced tuberculous, and upon being killed, were found to be diseased. In fifteen other herds there were 244 head. Twenty-eight of these showed marked symptoms of tuberculosis, and twenty-four more were suspected. Post-mortems, however, were not obtained. Thus in these forty-nine herds, consisting in all of 1,110 animals, 271 were reported as tuberculous and 213 as suspicious.

Later reports and more extensive examinations increase rather than diminish the per cent. of tuberculous animals.

Dr. Harold C. Ernst, in his report to the Massachusetts Society for the Promotion of Agriculture, published in 1895, in which he tabulates the replies given to a series of questions, gives the following summary :

In the practice of thirty-nine veterinarians, representing seventeen states, most of them reporting for one year only, there occurred 549 cases of tuberculosis, and 242 suspicious cases, a total of 749 among 165 herds, containing, in round numbers, 3,000 animals ; that is, in the herds where tuberculosis existed, about 18 per cent. were diseased, and over 8 per cent. suspicious, a total of about 26 per cent.

It is proper to state here that, while tuberculosis is so prevalent and so widespread, the number of cattle affected with the other diseases named is comparatively small.

Having shown the extent to which tuberculosis exists, it is pertinent to inquire as to the danger of using milk from animals thus diseased. Nor is there an abundance of evidence wanting on this point.

Dr. Ernst, in obtaining data for his report above referred to, made an effort to obtain, so far as possible, clinical reports of cases of transmission of tuberculosis through milk from mother to offspring. In order to secure reports from the most reliable as well as most probable sources of information, he addressed a letter to eighteen hundred physicians and veterinarians, selecting



the former from the membership of the Massachusetts Medical Society of at least five years' standing, from the American Surgical Association, from the American Medical Association, and from one or two other special societies of the country. The names of the latter were taken from the rolls of the United States Veterinary Association, and included those who were thought to have had enough experience to make their observations of possible value in this direction.

The direct question asked was : "Have you ever seen a case of tuberculosis which it seemed possible to you to trace to a milk supply as a cause?"

After receiving replies from the majority of those thus interrogated, he concludes his report as to the infectiousness of milk as follows :

"1. While the transmission of tuberculosis by milk is probably not the most important means by which the disease is propagated, it is something to be guarded against most carefully.

"2. The possibility of milk from tuberculous udders containing the infectious element is undeniable.

"3. With the evidence here presented, it is equally undeniable that milk from diseased cows, with no appreciable lesion of the udder, may, and not infrequently does, contain the bacillus of the disease.

"4. Therefore, all such milk should be condemned for food."

It is a well-settled fact that milk in the udder of a healthy cow is normal and free from all micro-organism, and that it is only after leaving the udder that these organisms make their appearance.

It has been an interesting question and the occasion of careful and painstaking observation and experimentation as to whether the milk, as it comes from the udder of a tuberculous or otherwise diseased cow, is so affected by her diseased condition as to produce the same or a similar disease in other animals (including the human) by using it ; or whether the contraction of tuberculosis following the use of such milk is the result of the introduction of the tubercle bacillus during and after the process of milking.

The opportunities to determine this point must be rather few.

As soon as the milk leaves the teat it is liable to infection in numerous ways, and even the calf receiving the milk directly into its mouth from the udder may get the infection from the external



surface of the teat by germ-laden dust, or other adherent particles. Experiments that have been made in which all known or possible sources of infection were eliminated seem to prove conclusively that the milk of a tuberculous cow, even before it leaves the udder, as well as the meat of the animal, is infectious in character, unsafe, and unfit for food. This applies to cows in which there is no appreciable lesion of the udder, and is a refutation of the opinion so generally prevailing that only cows having tuberculous udders are capable of reproducing the bacillus in the milk.

At the Iowa Agricultural College experiment station, as a result of observations and experiments by Drs. Stalker and Niles, it was found that calves from healthy mothers that were at birth put with tuberculous animals to be raised, in a few months developed tuberculosis, while calves dropped from tuberculous animals and brought up by healthy cows showed no sign of the disease at all, grew well, were sleek, took on fat, and when killed later, showed none of the characteristic lesions of tuberculosis; thus showing that, so far as these experiments indicated, tuberculosis was not hereditary, and that the milk from tuberculous cows produced the disease in calves born of healthy animals.

Prof. James Law, in his very able paper on "Tuberculosis in Relation to Animal Industry and Public Health," dwells upon this point at considerable length. Coming from a source so eminent, his conclusions are entitled to, and have received, generous consideration and implicit confidence.

After considering the danger of the transmission of tuberculosis by the blood and meat of tuberculous animals, he proceeds to the consideration of the "danger from milk," and says:

"Milk is more to be dreaded than meat, because the udder is often the seat of tuberculosis, and the milk is usually taken uncooked. The danger is enhanced by the fact that this is often the necessary and only food of the infant and the invalid, in which the germ is especially liable, through weak and imperfect digestion, to escape into the susceptible bowel.

"In milk, as in the case of meat, a strong and vigorous digestion does, in some measure, protect the consumer. Peuch fed a two-months old pig, in five days, four and one half quarts of milk drawn from a tuberculous udder, and, killed in fifty-six days, it proved quite sound. He inoculated four rabbits with the milk and all four became tuberculous. Again, in the absence of tuber-

culosis in the udder, the milk may be little, if at all, infecting. Gerlach, who produced tuberculosis in calves, pigs, and rabbits by feeding the milk, found no results from certain tuberculous cows, while others infected a large proportion. Nocard and McFadyean have been unable to infect rabbits, etc., with milk from an apparently sound udder of a tuberculous cow. The same has been my experience with milk from one cow in the last stages of chronic tuberculosis, and another having acute tuberculosis. Bollinger, Nocard, and McFadyean claim that in the absence of tubercle in the udder the milk is not infecting. Whether true or not, as an ultimate fact this cannot be made a rule of action, as the following will show:

“Hirschberger inoculated rabbits in the abdominal cavity with the milk of twenty-nine tuberculous cows, of which the udders were, or appeared, sound, and produced tuberculosis fourteen times.

“Bang inoculated from sixty-three cows selected for their sound udders, and found the milk of nine of them infecting. A careful microscopic examination revealed tuberculosis in the udders of three of the cows, leaving six giving infecting milk in which even after death, and with all scientific appliances, no tubercle could be found in the udder. This is nine and one-tenth per cent., as tested by the microscope after death; it was fourteen and twenty-eight hundredths per cent., as tested by the able veterinary professor during the life of the cows.

“Ernst found ten cows in thirty-five with infecting milk, though the udders were sound. In one hundred and three animals inoculated, seventeen contracted tuberculosis, and of twelve calves sucking the cows, five became tuberculous.

“Drs. Smith and Kilborne (Bureau of Animal Industry, Bulletin No. 3) found the milk infecting in three cows out of six with apparently sound udders. One infecting cow and one non-infecting one had each tubercle in the lymphatic gland behind the udder. Forty-four per cent. of the inoculated guinea pigs contracted tuberculosis; one in five from one cow, eight in ten from another, and six in six from a third.

“In my own experience, three calves from healthy parents, sucking the apparently sound udders of three cows with general tuberculosis, all contracted the disease.

“It must be allowed that calves sucking the cows run extra risk of infection through their nurses licking them, and through

feeding from a common trough, but there is the same danger for the ordinary milk consumer, since the cow, in licking her udder, is liable to leave bacilli to fall into the pail at the next milking.

"Again, the concentration of the bacillus in the undiluted milk of an infecting cow, rendered this much more dangerous than the milk of the same cow diluted with that of twenty, fifty, or one hundred cows.

"Bollinger and Gebhardt found that milk which infected all animals which took it pure, was apparently harmless when diluted with fifty or one hundred times its volume of the milk of sound cows. As the bacillus can live in milk, this apparent loss of virulence must be largely due to the reduction of the number of bacilli in a given measure of milk, and to their tendency to removal by adhering to the sides of the vessel during the mixing.

"Tuberculous expectoration, which is incomparably richer in bacilli, may be diluted in one thousand times its volume of water, and yet remain infecting. But again, the glutinous saliva forms a protecting coating which strongly resists dilution.

"Instances of accidental tuberculosis of the human being through drinking the unsterilized milk are no longer wanting.

"In the practice of Dr. Amorback, a well-developed five-year-old boy from sound parents, whose ancestors on both male and female sides were free from hereditary taint, succumbed after a few weeks' illness with acute milliary tuberculosis of the lungs and enormously enlarged mesenteric glands. A short time before, the parents had their family cow killed, and found her the victim of advanced pulmonary tuberculosis. (Lydtin.)

"Dr. Demme records the case of four infants in the Child's Hospital, at Berne, the issue of sound parents, without any tuberculous ancestry, that died of intestinal and mesenteric tuberculosis, as the result of feeding on the unsterilized milk of tuberculous cows. These were the only cases in which he was able to exclude the possibility of other causes for the disease, but in these he was satisfied that the milk alone was to blame.

"After a lecture of the author's at Providence, R. I., a gentleman of North Hadley, Mass., a graduate of the Massachusetts Agricultural college, publicly stated that his only child, a strong, vigorous boy of one and one-half years, went to an uncle's for one week and drank the milk of a cow which was shortly after condemned and killed in a state of generalized tuberculosis. In six weeks the child was noticeably falling off, and in three months

he died, a mere skeleton, with tuberculosis of the abdomen. The father could trace no tuberculosis among his near ancestors, but the mother's father and uncle had both died of it. She remains in excellent health.

"Dr. E. O. Shakespeare (*Med. News*, March 26, 1892) attributes one fifth of all deaths of infants and young children feeding on milk to tuberculosis, usually commencing in some part of the digestive organs."

In June, 1896, Drs. Sidney Martin and Gins Woodhead, and Professor McFadyean, of the Royal Commission of England, who were appointed to make special inquiries as to the effect of food derived from tuberculous animals, made their report. The report of Dr. Martin, who is exceedingly conservative, is of special value, because of the positive results he obtained with regard to the infectivity of milk from tuberculous cows. He says: "The milk from cows with tuberculosis of the udder possesses a virulence which can only be described as extraordinary."

He recommends as a practical measure, that the milk from all cows in which one or more quarters of the udder are enlarged, or modulated, or in which the milk from one or more quarters fails either in quality or quantity, should be at once excluded, and the cows examined by an expert. He further declares that every tuberculous cow must be looked upon with suspicion, for, although the presence of tuberculosis of the internal organs, in his opinion, does not confer infectivity on the milk, yet tuberculosis may develop in the udder at any stage of the general disease.

Dr. Woodhead, by his experiments and observations, arrives at the conclusion that in children, at least, general tuberculosis infection is, in many, very many cases to be traced to the ingestion of infected milk—that is, it is not necessary that a local lesion of the alimentary canal should be produced. The tubercle bacillus may run the gauntlet of the lymphoid tissue of the intestines and pharynx, to establish itself in the mesenteric, or the cervical, and finally the trachio-bronchial glands, from which, by a process of extension, or secondary infection, tuberculosis of the peritoneum, the lungs, or a generalized tuberculosis may ensue.

Prof. M. Stalker, of the veterinary department of Iowa Agricultural College, who has been making extensive investigations of this subject, reports two cases which came under his observation. One case was where five young people between the ages of



twenty and thirty years died of consumption in one family during a period of two years. No trace of the disease had ever been known in the family of either the father or mother of the victims. On the farm where the deaths occurred, he found seventeen cases of tuberculosis in the herd of cattle, and others had died before the investigation was made.

Another case was in connection with a diseased herd of cows that was under test. A mother and child died; the mother from undoubted consumption; the child from intestinal trouble highly suggestive of the same disease. The cow that had supplied milk to the mother and child was tested and found to be tuberculous. Post-mortem examination of the cow revealed a badly tuberculous condition of the udder.

Enough has already been said to convince the most skeptical that there is great danger of infection from the use of milk from diseased animals, especially from tuberculosis.

Unfortunately, the only infected and dangerous milk is not from tuberculous cows. It is well known that the best milk—milk from cows in which there is not a taint of disease, after leaving the cow becomes infected. It will be readily conceded that the most of the cases of disease arising from the use of infected milk occur where the milk has been from healthy cows, and into which the pathogenic germs were introduced after leaving the cow. The extensive epidemics of infectious diseases produced by the use of infected milk arise in this manner.

Drs. Busey and Kober, above referred to, in noticing some instances of milk that had acquired infective properties only after it had left the udder of the cow, say :

“Numerous instances have been observed in which outbreaks of typhoid fever, scarlet fever, and diphtheria, by their sudden and explosive character, affecting families living in streets or localities visited by the same milkman, naturally pointed to the milk supply as a common cause; but to Dr. Michael Taylor belongs the honor of being the first to point out definitely that cows' milk might serve as a medium of spreading typhoid fever from a dairy where the disease prevailed. In 1867, Dr. Taylor also showed that scarlet fever might be distributed in the same way. In 1877, Mr. Jacob traced a diphtheria epidemic at Sutton to milk supply, and in 1872, Macnamera traced an epidemic of cholera at Calcutta to an infected dairy.”

“These facts could not fail to invite criticism and sharpen the



power of observation in others, and in consequence similar outbreaks were more frequently reported, so that Mr. Ernst Hart, in a most valuable paper, was enabled to present to the International Medical Congress held in London, 1881, the history of fifty outbreaks of typhoid fever, fifteen of scarlet fever, and seven of diphtheria, all traceable to the milk supply ; but even this formidable display of facts was not accepted as conclusive, largely because the milk industry constitutes a strong spoke in the commercial wheel, and naturally opposed what they considered meddling interference with their trade, and in many instances were upheld by members of our profession who considered the evidence wholly circumstantial and incomplete, as long as the specific germ of the respective diseases had not been demonstrated in the suspected milk. \* \* \* An approach in this direction worthy of emulation has been made by Prof. Vaughan before the Congress of Demography, in London, August, 1891, when he declared:”

“ Milk has been frequently diluted with water containing germs of typhoid fever, and the prevalence of the disease may mark the daily rounds of the milkman. I have here a culture tube containing a bacillus which I found simultaneously in the water from the dairy well, and in the milk from the cans. At the same time one or more cases of typhoid fever existed in every family which patronized this milkman. The bacillus resembles, but is not identical with, that of Eberth.”

They further, in their report of epidemics of typhoid fever, scarlet fever, and diphtheria, say :

“ Mr. E. Hart tabulated fifty epidemics of typhoid fever, and we have collected eighty-eight, making a total of one hundred and thirty-eight epidemics traceable to a specific pollution of the milk. In one hundred and nine instances there is evidence of the disease having prevailed at a farm or dairy. In fifty-four epidemics the poison reached the milk by soakage of the germs into the well water with which the utensils were washed, and in fourteen of these instances the intentional dilution with polluted water is admitted. In six instances the infection is attributed to the cows drinking or wading in sewage-polluted water. In three instances the infection was spread in ice cream prepared in infected premises. In twenty-one instances the dairy employés also acted as nurses. In six instances the patients while suffering from a mild attack of enteric fever, or during the first week or ten days of

their illness, continued at work, and those of us who are familiar with the personal habits of the average dairy boy will have no difficulty in surmising the manner of direct digital infection. In one instance the milk tins were washed with the same dishcloth used among fever patients. In this instance the disease was attributed to an abscess of the udder (?), in another to teat eruption (?), and in still another to a febrile disorder (?) in the cows. In four instances the disease was spread through the medium of creameries, and in one instance the milk had been kept in the sick-room.

“Mr. Hart collected statistics of fifteen epidemics of milk scarlet fever, and we have tabulated fifty-nine, making a total of seventy-four epidemics spread through the medium of milk supply (?).

“In forty-one instances the disease prevailed either at the milk farm or dairy. In six instances persons connected with the dairy either lodged in or had visited infected houses. In another instance the milkman had taken his can into an infected house. In twenty instances the infection was attributed to disease among the milch cows; in four of these the puerperal condition of the animal is blamed. In nine instances disease of the udder or teats was found. In one instance the veterinarian diagnosed a case of bovine tuberculosis. In six instances there was loss of hair and casting of the skin on the animals. In another instance the cattle were found to be suffering more or less from febrile disturbance. In ten instances the infection was conveyed to persons connected with the milk business while suffering or recovering from an attack of the disease, and in at least eight cases by persons who acted as nurses. In three instances the milk had been kept in the cottage close to the sick-room. In another instance the cows were milked into an open tin can, which was carried across an open yard past an infected house; and in another instance, the milkman had wiped his cans with white flannel cloths (presumably infected) which had been left in his barn by a peddler. Two epidemics appear to have been instances of mixed infection of scarlet fever and diphtheria.

“He also collected statistics of seven epidemics of milk diphtheria, and we have added twenty-one more. In ten of these twenty-eight instances, diphtheria existed at the farm or dairy, and in ten instances the disease is attributed directly to the cows having garget, chapped and ulcerative affections of the teats and udder,

while in one instance the cows were apparently healthy, but the calves had diarrhœa. In another instance one of the dairy-maids suffered from a sore throat of an erysipelatous character; in another, the patient continued to milk while suffering from diphtheria; and in still another, one of the drivers of the dairy wagons was suffering from a sore throat.

"It is interesting to note that of one hundred and thirty-eight epidemics of milk typhoid, seventy-four of scarlet fever, and twenty-eight of diphtheria, a total of two hundred and forty epidemics, one hundred and eighty-seven have been recorded by English authors, thirty-one by American, and nine by Scandinavian; eight came from Germany, three from Australia, and one each from French and Swiss sources.

"Whether this is due to the fact that on the continent of Europe, milk is rarely used in a raw state, or whether it is simply an index of the greater interest taken in England and the United States in preventive medicine, remains to be determined."

Three or four instances of epidemics of typhoid fever occurring in this country from the use of infected milk will be given somewhat in detail, in order, not only to demonstrate that such outbreaks do occur, but to also illustrate the necessity for, and the success attainable by, intelligent and faithful investigation.

In June, 1890, the Connecticut State Board of Health was requested to investigate an outbreak of typhoid fever at Waterbury. Attention was first directed to the water supply and drainage, which were found not to be the cause. There were thirty-five house invasions with fifty cases. Of these, twenty-six houses, with forty-one cases, it was discovered, were supplied with milk from the same milkman; that this milkman secured his milk from several farms; that the invasion followed the route of milk from a certain one of these farms. An investigation was made at this farm, and it was found that the farmer, his daughter, and a farm hand had been sick with typhoid fever. The excreta of the sick were thrown upon the barn-yard; the hired man defecated, so long as able to be about, in the cow stables. The barn-yard was in a bad condition. The milk was handled in a shed attached to the barn. In fair weather the milk cans were washed outside the shed; on rainy days inside the shed. A door opened from the shed into the cow stables on one side, and another door into the barn-yard. In the yard was a tank in which the milk cans were placed to cool. The can lids were

tilted so as to admit the air. There could be no question as to the source of the infection of the milk. The water used was from a spring, and free from the typhoid bacillus. The material of the barn-yard was infected, and the conditions were favorable for extensive multiplication. It was tracked into the milk room by the men, and there drying into dust, was carried by air currents into the milk.

Among the cases in this invasion was one of a person who did not use the milk. But it was found that two weeks prior, ice cream had been eaten, and that the milk came from the infected farm—thus confirming the work of Prudden, and others, that typhoid bacilli retain their vitality for months frozen in blocks of ice. The milk supply from this farm was stopped, and the disease subsided.

In August, 1892, an epidemic of typhoid fever appeared in a particular portion of the city of Springfield, Mass., a detailed account of which is given in the report of the State Board of Health. The people, as well as the physicians, were perplexed, and various theories were put forth as to the source of infection; for it was in the best part of the city, where the environments apparently precluded the usually accepted sources. First, the water of certain wells was suspected, but investigation showed that most of the infected families used only water from the city water-works, which was uncontaminated. The drainage was suspected, but it was shown that the houses were mostly new, and the plumbing good. The sewer was suspected, but families living nearest the manholes of the sewers were unaffected. The cemetery was also suspected, but it was found that a well in the cemetery contained less ammonia than wells in the typhoid district, where the disease was most prevalent. The theory of ice infection was also tested and exploded. It was finally discovered that all the infected families were supplied with milk from one man; that in the most infected portion, one family was exempt entirely from the disease, and this family received milk from another milkman. On investigation of the farm of the milkman, it was found that early in the spring the milkman's daughter was sick with so-called "billious typhoid fever." Others of the family were also sick with a "slow fever." The excreta of the patients were thrown into a privy vault, and the contents of the vault were subsequently thrown upon a tobacco field. Near by was a well not used for drinking purposes. Into this well the milkman



lowered his cans of milk, letting them sink to the bottom, to remain until they were taken away to supply his route. In the well was an old chain pump. Over the well were loose planks. The men, in wet weather, tramped over the tobacco field, through the cow yards, and then to the well. The planks over the well were filthy with mud, and careless pumping washed the mud and filth into it. The water was dirty, and was found to contain *bacilli coli communis* to an enormous extent. Nine milk cans were lifted from the well. They were stopped with wooden stoppers. On tipping the cans, milk ran out around the stoppers. This being true, the water of the well would run in. None of the cans were full. The facts, as developed in this investigation, left no room for doubt or question as to the source of the epidemic, wherein there were one hundred and fifty cases, with twenty-five deaths. Of the one hundred and fifty cases, one hundred and one had milk from the same man, and one hundred and thirty-five had access to the same milk.

In October, 1894, the secretary of the Board of Health of Titusville, Pa., found three cases of typhoid fever on a farm. From this farm milk was taken to the city. Within four weeks there were fifty cases of typhoid fever, all in families which had been using milk from this farm. The first case on the dairy farm was brought from this city, Buffalo. The mother took care of the sick and the milk at the same time.

In April, 1895, a serious outbreak of typhoid fever occurred in the city of Stamford, Conn. It was so sudden and widespread that Dr. Lindsley, secretary of the State Board of Health, was called to make an investigation as to the cause, and to assist in suppressing it. He reports that attention was first given to the water supply, but was soon abandoned. So, also, the food supply. It was soon discovered that sickness followed exactly the route of a certain milkman. In various parts of the city, there were three hundred and eighty-six cases, of which three hundred and seventy-six were persons who used milk from this milkman, while in houses contiguous, where milk from another source was used, there were no cases. There were twenty-five deaths. The appearance of the disease was simultaneous over the district. So soon as the source of infection was discovered, the milk supply from this man was stopped, and the disease at once subsided. Investigation of the premises of the milkman revealed the fact that he washed his milk cans with water from a well which chem-



ically showed contamination by sewage. Prudden discovered six thousand, six hundred and ninety living bacteria in a single cubic centimeter of the water.

The water in the well was only one foot and nine inches below the surface, and overflowed in the spring, and surface drainage was toward the well. A shallow privy vault, leaking at the surface, was twenty-five feet distant, and free of access to a "walking case" of typhoid fever. The conclusion was irresistible that the source of this outbreak was milk, and the source of infection of the milk was the water from this well, contaminated by drainage from this privy.

The foregoing is sufficient to establish the fact that milk from infectious animals, especially from tuberculous animals, and that also from healthy animals when infected by disease germs, is dangerous and leads to a very brief consideration of the sources of infection and the remedy.

It is not necessary, as it would not be profitable, were it possible, to note in detail all the physiological or pathological processes by which the milk of a tuberculous cow is changed in the udder from a healthful and nutritious product into one carrying disease and death to those who use it. We only know that such has been demonstrated to be the fact.

I have pointed out, in the instances above given, some of the methods by which milk, after it leaves the udder, becomes infectious. While milk in the healthy cow's udder is free from bacteria, it is well known that the milk of commerce, especially as found in the cities, is swarming with these micro-organisms. Fortunately few of these bacteria are harmful, and many are useful, if not essential.

While, therefore, milk is favorable to the growth and development of so many harmless germs, it is also favorable for the propagation of pathogenic germs.

The following are some of the methods by which these germs, beneficent and malevolent, gain access to the milk outside of the udder :

By the process of milking itself. Particles of dirt from the hands of the milker, from the teats and udder, and from the sides of the cow, fall into the pail. The pail itself may have been washed with impure water, and been imperfectly dried ; or the germs may have been floating in the air and settled in the bucket before, during, or after the milking. The stables may have been

in a filthy condition, and the cows lying in the filth, having it adherent to their udders, drop it into the pail. The hands of the milker are often moistened with the milk to contribute greater ease and facility to the process of milking, and drops of the milk thus used, laden with impurities, if not with filth, get into the milk.

Then, it often happens in many ways, that the milk after it leaves the dairy is infected by the addition of water, and by varying changes of temperature, especially a higher temperature, which greatly favors the rapid multiplication of the bacteriæ.

Even if the milk has reached the consumer in good condition, it may become infected because of the filthy or careless habits of the inmates, or by the presence of infectious diseases in the family. It has been found in several instances that milk was infected in the dairy because of sickness in the home of the proprietor or some of the milkmen.

Is it any wonder, then, that milk should be rendered infectious? Is it not rather a miracle that the mortality from its use is not greatly multiplied? The only remedy is suggested by the causes above enumerated, and may be summed up under three heads—inspection, cleanliness, and sterilization.

All dairy cattle should be carefully inspected by a competent veterinarian, with a view to determining the presence of tuberculosis, and all diseased or suspected animals should be condemned. The habits of dairymen with respect to cleanliness, the barns, the water supply, should all be known and recorded.

The sale of milk from dairies or private families where infectious diseases exist should be prohibited.

The strictest cleanliness of animals, persons, and surroundings should be enjoined and enforced; and the almost certainty of infection from the lack of cleanliness, as well as the terrible results so often following the use of milk so infected, should be taught in every home and school.

REPORT ON THE INVESTIGATIONS OF RIVERS  
POLLUTION AND WATER SUPPLIES.

BY PROF. HERBERT E. SMITH, M.D.,

CHEMIST OF THE BOARD.

The investigations of rivers pollution and water supplies during 1896 have been a continuation of the previous work. The chemist of the Board, Prof. Herbert E. Smith, has had the general supervision of the investigations, under the direction of a committee of the Board consisting of Prof. C. A. Lindsley, Secretary, and Prof. William H. Brewer, President. Mr. Wm. H. Parker was associated with the chemist in the chemical part of the work; the microscopical examinations were conducted by Mr. Harry A. Doty.

Attention has been directed during the year to the chemical examination of certain sewage-polluted streams; to the chemical and microscopical examination of the public water supplies of certain cities; to the collection of data concerning the public water supplies of the State, and to certain examinations connected with the question of the purification of sewage.

The results obtained in the examination of water supplies are given in the following pages. Those concerning the Greenwich supply are of special interest because this supply is subjected to forced sand filtration with the use of alum as a coagulant. The analyses were made of both the filtered and unfiltered water.

To obtain more accurate information concerning the water supplies of the State than was already in the possession of the Board, requests for information, with proper blanks, were sent to the various water officials as far as known throughout the State. My thanks are due to these gentlemen for their courteous replies, and it is a pleasure to express here my appreciation of their favors. The preparation of the data for publication has been chiefly the work of Mr. William H. Parker. In some cases the information obtainable was so meager that the accounts had to be made up chiefly of such information as we already had, or such as could be obtained from the accounts given in the "Manual of American Water Works," published by the Engineering News, and from the State Topographical Map. As far as possible, however, the information was obtained at first hands from some one connected with the various works.

It is to be regretted that more detailed information cannot be had of the character of the watersheds, but such for the most part can only be obtained by an expert inspection, and that is at present impossible. Where analyses have been made by the Board of the water supply, the averages obtained are stated in connection with the description of the works, and references are given to the places where fuller information may be found. A number of public supplies have not yet been examined, but it is expected that arrangements can be made to examine the more important of these during the coming year.

The rivers from which samples for analyses have been taken are the Naugatuck, Quinnipiac and Hockanum. The Naugatuck and Quinnipiac will receive attention during the coming year.

As stated in the last report, the increasing complaints of the pollution of streams are forcing our city and town authorities to pay more attention to the purification of sewage before it is discharged into the rivers. Of all means which have been devised for this purpose, those which are most approved are those dependent upon sand filtration. Meriden and Bristol are already treating sewage by this method, and arrangements are being made for the disposal of the sewage of Danbury also by filtration.

With the view of obtaining information concerning the workings of the method, certain examinations have been made during the year at both Bristol and Meriden, and the results so far obtained are to be found on the following pages. The amount of ground water in the Bristol sewage constitutes at present so large a proportion of it that examinations there for the present have been suspended, but it is proposed to continue analyses of the sewage of Meriden, and also the effluent from the sewage beds during the coming year. Mechanical analysis of the sand used for filtration at each of the places named will be made.

#### ANALYSES OF BRIDGEPORT WATER SUPPLY.

The samples were supplied by Mr. S. G. Stoddard, Jr., of the Bridgeport Hydraulic Co., and were taken at the following places :

No. 1. *The Mill River Supply*, from a tap at the Country Club, which was supplied from the main supply pipe from the reservoir.

No. 2. *The Island Brook Supply*, from the gate house at the reservoir.

No. 3. *The Poquonnoc River Supply*, from a tap at the pump house.



FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.		Color.	Residue on Evaporation.			Chlorine.	Nitrogen of				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1236	1896													
1244	Jan. 29	Slight.	Very scanty.	.5	48.5	35.5	13.0	3.05	0.048	0.142	0.006	0.20	10.	5.35
1269	Feb. 19	Distinct.	Scanty.	.3	38.5	23.5	15.0	2.40	.026	.144	.000	.15	8.	4.9
1287	Mar. 25	Slight.	Very scanty.	.4	38.0	26.5	11.5	2.20	.018	.130	.002	.06	5.	3.9
1304	April 22	Distinct.	Scanty.	.3	34.0	22.0	12.0	2.85	.012	.098	.000	.15	6.	3.15
1326	May 20	Slight.	Scanty.	.3	41.0	25.0	16.0	2.70	.024	.130	.002	.06	7.	3.7
1347	June 15	Slight.	Scanty.	.4	38.0	24.0	14.0	2.60	.024	.142	.002	.05	7.	4.05
1380	July 14	Distinct.	Very scanty.	.7	52.5	30.5	22.0	2.60	.024	.154	.002	.08	12.	4.45
1399	Aug. 25	Distinct.	Very scanty.	.8	55.0	31.5	23.5	2.90	.058	.150	.010	.08	13.	4.00
1420	Sept. 15	Slight.	Scanty.	.6	60.0	44.0	16.0	3.00	.018	.156	.000	.10	12.	4.75
1444	Oct. 13	Slight.	Scanty.	.6	40.5	23.0	17.5	2.80	.038	.156	.002	.10	10.	5.2
1457	Nov. 11	Slight.	Scanty.	.5	47.5	31.5	16.0	3.45	.026	.182	.000	.10	10.	6.00
	Dec. 9	Slight.	Very scanty.	.5	48.0	32.5	15.5	3.55	.028	.180	.000	.13	10.	6.2
			Average,	.5	45.1	29.1	16.0	2.93	.030	.147	.002	.11	9.	4.64

REMARKS.—The odor was recorded as slightly mouldy in No. 1244, and as little or none in the other samples.



# BRIDGEPORT.—NO. 1, MILL RIVER SUPPLY. MICROSCOPICAL EXAMINATION, 1896.

Figures show the average number of organisms per cubic centimeter of water.

\* indicates present in small numbers.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>DIATOMACEÆ—</b>												
Synedra .....	16	2	13	12	26	---	205	6	6	6	6	6
Cyclotella .....	14	---	3	2	172	52	30	58	62	38	26	50
Achnanthes .....	6	50	6	4	10	10	---	---	---	32	---	86
Asterionella .....	4	4	2	4	56	1024	20	14	64	148	398	284
Nitzschia .....	4	---	7	10	22	2	290	---	---	---	14	12
Tabellaria .....	4	6	12	146	640	22	55	14	166	42	320	286
Gomphonema .....	2	---	3	---	---	---	---	---	2	---	2	---
Melosira .....	10	2	5	6	108	102	75	20	414	72	24	8
Navicula .....	2	10	3	2	14	---	---	2	2	2	---	2
Meridion .....	---	2	5	---	---	2	---	2	---	2	4	2
Ceratoneis .....	---	2	---	---	---	---	---	---	---	2	---	---
Surirella .....	---	---	1	---	---	---	---	---	2	---	---	2
Cocconema .....	---	---	---	---	---	---	---	---	---	4	---	---
Pleurosigma .....	---	---	---	---	---	---	---	---	---	2	---	---
<b>DESMIDIACEÆ—</b>												
Staurostrum .....	24	2	2	---	8	10	30	6	2	---	8	2
Arthrodesmus .....	---	---	---	---	---	---	5	---	---	---	---	---
<b>PROTOCOCCOIDEÆ—</b>												
Raphidium .....	---	---	3	34	4	---	40	---	2	---	---	4
Pediastrum .....	---	---	---	---	2	---	---	---	---	2	*	---
Scenedesmus .....	---	---	---	---	8	---	80	8	---	---	---	---
Ophiocytium .....	---	---	---	---	---	4	---	4	---	---	---	---
Dactylococcus .....	---	---	---	---	---	---	---	---	---	---	8	4
Green cells unidentified .....	---	---	---	2	8	42	35	16	---	4	---	216
<b>CONFERVACEÆ—</b>												
Conferva .....	---	---	1	---	---	---	---	---	---	---	---	---
<b>CYANOPHYCEÆ—</b>												
Celosphaerium .....	---	---	---	---	---	---	---	2	---	---	---	---
<b>FUNGI—</b>												
Crenothrix .....	---	---	---	---	---	2	---	---	---	---	---	---
Unidentified .....	---	---	---	---	2	---	---	---	---	---	---	---
<b>PROTOZOA—</b>												
Peridinium .....	2	---	1	20	12	---	25	---	---	---	2	---
Dinobryon .....	---	14	13	16	36	294	65	---	---	2	---	8
Vorticella .....	---	4	---	---	---	---	---	---	---	---	---	---
Trachelomonas .....	---	---	6	---	---	---	5	8	4	2	4	4
Chlorogonium .....	---	---	2	---	---	---	---	---	---	---	---	---
Codonella .....	---	---	---	---	*	2	---	---	---	---	---	---
Euglypha .....	---	---	---	---	---	2	---	6	---	---	---	---
Amoeba .....	---	---	---	---	---	---	---	2	---	---	---	---
Glodinium .....	---	---	---	---	---	---	---	---	---	---	---	4
Tintinnus .....	---	---	---	---	---	---	---	---	---	---	---	*
Infusoria unidentified .....	---	---	10	---	---	---	---	4	---	---	---	2
<b>ROTIFERA—</b>												
Floscularia .....	---	---	---	---	---	---	5	---	---	---	---	---
<b>SPORES</b> .....	---	6	1	---	---	---	---	2	---	---	---	---

## SUMMARY.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Diatomaceæ .....	62	78	60	186	1048	1214	675	116	718	350	794	738
Desmidiaceæ .....	24	2	2	---	---	8	10	35	6	2	8	2
Protococcoideæ .....	---	---	3	36	22	46	155	28	2	6	8	224
Confervaceæ .....	---	---	1	---	---	---	---	---	---	---	---	---
Cyanophyceæ .....	---	---	---	---	---	---	---	2	---	---	---	---
Fungi .....	---	---	---	---	2	2	---	---	---	---	---	---
Protozoa .....	2	18	24	44	48	298	95	20	4	4	6	18
Rotifera .....	---	---	---	---	---	---	5	---	---	---	---	---
Spores .....	---	6	1	---	---	---	---	2	---	---	---	---

BRIDGEPORT.—NO. 2, ISLAND BROOK SUPPLY. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.		Residue on Evaporation.				Nitrogen of				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.	Color.	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.	
1237	1896 Jan. 29	Slight	Very scanty.	.4	51.0	37.5	13.5	3.90	0.062	0.166	0.002	0.10	4.55
1245	Feb. 19	Distinct.	Scanty.	.4	35.5	22.5	13.0	3.50	.02	.158	.000	.15	4.25
1270	Mar. 25	Slight.	Very scanty.	.3	40.0	27.5	12.5	3.70	.02	.160	.002	.08	3.65
1288	April 22	Slight.	Very scanty.	.3	36.0	24.0	12.0	3.70	.012	.134	.002	.15	3.00
1305	May 20	Slight.	Very scanty.	.4	38.0	22.0	16.0	3.50	.024	.188	.000	.02	4.2
1327	June 15	Slight.	Scanty.	.4	39.0	22.5	16.5	3.15	.020	.180	.000	.03	4.35
1348	July 14	Distinct.	Scanty.	.5	41.5	25.5	16.0	3.20	.014	.190	.000	.02	5.00
1382	Aug. 25	Distinct.	Scanty.	.6	47.0	26.5	20.5	3.70	.010	.180	.003	.02	3.95
1401	Sept. 15	Distinct.	Scanty.	.4	49.0	23.5	25.5	3.90	.012	.206	.000	.05	5.45
1421	Oct. 13	Marked.	Scanty.	.3	44.0	23.0	21.0	3.50	.012	.216	.000	.04	6.25
1445	Nov. 11	Slight.	Scanty.	.3	46.0	29.0	17.0	4.20	.038	.192	.000	.08	5.35
1458	Dec. 9	Slight.	Very scanty.	.3	54.0	35.0	19.0	4.70	.094	.198	.000	.05	4.55
			Average,	.4	43.4	26.5	16.9	3.72	.025	.181	.001	.07	4.55

REMARKS.—The odor was recorded as markedly disagreeable in No. 1382, and as little or none in the other samples.

BRIDGEPORT.—No. 2, ISLAND BROOK SUPPLY. MICROSCOPICAL EXAMINATION, 1896.

Figures show average number of organisms per cubic centimeter of water.

\* indicates present in small numbers.

	Jan.	Feb.	Mar.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
DIATOMACEÆ—												
Achnanthes	10	14	—	10	2	4	70	—	—	—	—	—
Nitzschia	10	20	6	62	60	52	—	100	—	200	135	—
Synedra	—	4	6	140	84	82	10	60	—	380	105	—
Asterionella	—	4	8	—	—	2	15	—	—	—	—	176
Tabellaria	—	*	8	66	54	14	15	*	—	—	—	14
Meridion	—	—	4	—	—	—	—	—	—	—	—	—
Navicula	—	—	2	—	—	4	5	—	—	—	—	—
Cyclotella	—	—	—	4	12	112	115	27	—	10	—	—
Melosira	—	—	—	—	12	—	185	—	—	—	—	—
Stauroneis	—	—	—	—	—	—	5	—	—	—	—	—
Gomphonema	—	—	—	—	—	—	—	—	—	—	5	—
DESMIDIACEÆ—												
Staurostrum	4	2	2	6	—	2	10	6886	21360	2180	40	—
Arthrodesmus	—	—	—	—	34	8	—	—	—	—	—	—
Euastrium	—	—	—	—	—	—	—	7	—	—	—	—
PROTOCOCCOIDEÆ—												
Raphidium	14	22	198	96	104	66	—	146	700	60	70	—
Polyedrium	—	—	—	—	8	—	—	—	—	—	—	—
Scenedesmus	—	—	—	—	8	8	20	—	—	—	20	—
Ophiocytium	—	—	—	—	2	2	5	—	—	—	5	—
Pediastrum	—	—	—	—	—	4	—	—	—	—	—	—
Dactylococcus	—	—	—	—	—	4	—	—	—	—	—	—
Green cells unidentified	—	—	—	10	36	6	160	—	—	10	—	16
CONFERVACEÆ—												
Conferva	—	—	—	—	—	—	5	—	—	—	—	—
CYANOPHYCEÆ—												
Oscillaria	—	—	—	2	—	—	—	—	—	—	—	—
FUNGI—												
Crenothrix	—	—	—	2	—	2	—	—	—	—	10	—
Leptothrix	—	—	—	—	—	—	—	—	—	10	—	—
PROTOZOA—												
Dinobryon	10	148	184	64	2	260	5	—	—	1090	—	—
Peridinium	6	8	6	—	16	8	5	13	—	20	5	—
Trachelomonas	2	2	2	10	—	8	15	*	—	60	*	—
Vorticella	—	2	—	—	—	—	—	—	—	—	—	—
Chlorogonium	—	—	—	2	—	—	—	—	—	—	—	—
Phacus	—	—	—	—	2	—	*	—	—	—	—	—
Synura	—	—	—	—	*	—	—	—	—	—	—	—
Codonella	—	—	—	—	—	6	*	—	—	10	—	—
Eudorina	—	—	—	—	—	—	5	—	—	—	—	—
Amoeba	—	—	—	—	—	—	—	7	—	—	—	—
Glenodinium	—	—	—	—	—	—	—	—	—	—	—	14
Actinophrys	—	—	—	—	*	—	—	—	—	—	—	—
"499"	—	—	—	—	14	—	—	—	—	*	—	4
Infusoria unidentified	52	2	16	14	26	—	—	27	—	10	10	20
ROTIFERA—												
Polyarthra	—	*	—	—	2	—	—	—	—	—	5	—
Synchaeta	—	*	—	—	—	—	—	—	—	—	—	—
Anurea	—	—	—	—	4	—	—	—	—	—	—	—
Conochilus	—	—	—	—	*	—	—	—	—	—	—	—
ENTOMOSTRACA—												
Unidentified	—	—	—	—	—	—	—	—	—	—	—	*
SPORES	—	88	10	2	—	—	—	—	—	—	—	—

SUMMARY.

	Jan.	Feb.	Mar.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Diatomaceæ	20	42	34	282	224	270	420	187	—	590	245	190
Desmidiaceæ	4	2	2	6	34	10	10	6893	21360	2180	40	—
Protococcoideæ	14	22	198	106	158	90	185	146	700	70	95	16
Confervaceæ	—	—	—	—	—	—	—	5	—	—	—	—
Cyanophyceæ	—	—	—	2	—	—	—	—	—	—	—	—
Fungi	—	—	—	—	—	2	—	—	—	10	10	—
Protozoa	70	162	208	90	60	282	30	47	—	1190	15	38
Rotifera	*	*	—	—	6	—	—	—	—	—	5	—
Entomostraca	—	—	—	—	—	—	—	—	—	—	—	*
Spores	—	88	10	2	—	—	—	—	—	—	—	—

BRIDGEPORT.—NO. 3, POQUONNOC RIVER SUPPLY. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.			Residue on Evaporation.			Chlorine.	Nitrogen of				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.	Color.	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1238	1896 Jan. 29	Slight.	Very scanty.	.5	41.5	30.5	11.0	2.8	0.012	0.138	0.002	0.10	7.	5.3
1246	Feb. 19	Distinct.	Scanty.	.4	35.5	25.5	10.0	3.0	.028	.130	.000	.12	5.	3.95
1271	Mar. 25	Slight.	Very scanty.	.3	37.0	24.0	13.0	2.85	.036	.148	.002	.10	5.	3.75
1289	April 22	Clear.	Scanty.	.4	37.5	27.5	10.0	3.20	.030	.100	.006	.20	8.	3.80
1306	May 20	Clear.	None.	.5	40.0	22.5	17.5	2.90	.042	.166	.000	.06	10.	4.8
1328	June 15	Clear.	None.	.5	45.0	25.5	19.5	2.70	.034	.160	.002	.05	8.	6.15
1349	July 15	Slight.	Very scanty.	.6	46.0	26.0	20.0	2.70	.026	.168	.002	.02	8.	6.45
1381	Aug. 25	Slight.	Scanty.	.7	50.5	28.5	22.0	3.36	.034	.152	.000	.02	10.	5.2
1400	Sept. 15	Slight.	Scanty.	.5	60.0	28.5	31.5	3.90	.034	.168	.002	.05	11.	5.3
1422	Oct. 13	Slight.	Very scanty.	.5	49.0	30.5	18.5	3.35	.024	.176	.002	.04	11.	6.40
1446	Nov. 11	Slight.	Scanty.	.8	56.0	35.0	21.0	4.10	.030	.200	.000	.08	10.	9.75
1459	Dec. 9	Slight.	Very scanty.	.7	65.0	40.0	25.0	3.90	.032	.172	.000	.13	10.	7.85
			Average,	.5	46.9	28.7	18.2	3.23	.030	.157	.002	.08	9.	5.73

REMARKS.—The odor was recorded as little or none in all of the samples.



Figures show average number of organisms per cubic centimeter of water.  
\* indicates present in small numbers.

### SUMMARY.

[illegible]



# ANALYSES OF DANBURY WATER SUPPLY.

The samples were furnished by Mr. Geo. C. Stevens, superintendent of the water works.

The samples Nos. 1 and 2 were taken from East Lake and the Upper Kohanza Reservoir, respectively, and No. 3 was from Bogg's Pond, a source which has been used as an auxiliary supply during times of low water.

No. 1.--DANBURY, EAST LAKE. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.			Residue on Evaporation.			Chlorine.	Nitrogen of				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.	Color.	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1250	Feb. 26	Distinct.	Very scanty.	.3	43.5	26.5	17.0	2.20	0.044	0.352	0.004	.15	8.	5.30
1282	April 15	Distinct.	Scanty.	.3	46.0	30.5	15.5	2.25	.054	.330	.002	.10	8.	4.50
1323	June 11	Distinct.	Moderate.	.4	41.0	23.5	17.5	3.30	.018	.268	.000	.02	8.	4.00
1375	Aug. 18	Slight.	Very scanty.	.4	43.5	26.0	17.5	2.50	.046	.174	.001	.03	12.	4.20
1430	Oct. 21	Distinct.	Small.	.5	47.5	28.0	19.5	1.90	.090	.170	.000	.04	14.	5.15
1461	Dec. 9	Slight.	Scanty.	.4	47.5	33.5	14.0	1.90	.044	.230	.000	.10	14.	4.55
			Average,	.4	44.8	28.0	16.8	2.34	.049	.254	.001	.07	11.	4.62

REMARKS.--The odor was described as slight, mouldy in No. 1282, and as none in the other samples.

## No. 1.--DANBURY, EAST LAKE. MICROSCOPICAL EXAMINATION, 1896.

Figures show average number of organisms per cubic centimeter of water.

\* indicates present in small numbers.

	Feb.	April.	June.	Aug.	Oct.	Dec.
DIATOMACEÆ—						
Nitzschia .....	2	25	80	4	10	15
Asterionella .....	4	-----	-----	20	40	30
Tabellaria .....	2	-----	250	4	35	5
Synedra .....	2	30	290	70	120	70
Cyclotella .....	-----	5	20	2	40	20
Melosira .....	-----	35	-----	-----	2775	2020
Ceratoneis .....	-----	-----	10	-----	-----	-----
Fragillaria .....	-----	-----	960	-----	-----	-----
Navicula .....	-----	-----	40	-----	5	-----
Cocconeia .....	-----	-----	10	-----	-----	-----
Achnanthes .....	-----	-----	-----	6	-----	-----
Gomphonema .....	-----	-----	-----	-----	5	-----
DESMIDIACEÆ—						
Staurastrum .....	-----	-----	70	18	-----	5
Arthrodesmus .....	-----	-----	10	-----	-----	-----
Cosmarium .....	-----	-----	20	2	10	5
Xanthidium .....	-----	-----	-----	-----	-----	-----
PROTOCOCCOIDEÆ—						
Raphidium .....	4	10	-----	16	5	-----
Polyedrium .....	-----	5	-----	2	10	-----
Scenedesmus .....	-----	-----	-----	24	40	80
Dimorphococcus .....	-----	-----	-----	2	-----	-----
Sorastrum .....	-----	-----	-----	4	-----	-----
Dactylococcus .....	-----	-----	-----	-----	150	55
" 775 " .....	-----	-----	100	-----	-----	20
Green cells unidentified .....	-----	-----	80	200	700	-----
CONJUGATÆ—						
Mesocarpus .....	-----	-----	20	2	-----	-----
CONFERVACEÆ—						
Conferva .....	-----	-----	110	-----	-----	-----
FUNGI—						
Crenothrix .....	-----	20	-----	-----	-----	-----
PROTOZOA —						
Dinobryon .....	178	10	1600	174	-----	375
Trachelomonas .....	-----	105	-----	2	20	-----
Euglypha .....	-----	-----	20	2	5	-----
Peridinium .....	-----	-----	-----	8	-----	-----
Phacus .....	-----	-----	-----	-----	-----	-----
" 499 " .....	-----	-----	20	8	-----	-----
Infusoria unidentified .....	16	5	-----	-----	-----	-----
ROTIFERA—						
Anurea .....	-----	*	-----	-----	-----	-----
Unidentified .....	-----	-----	-----	*	-----	-----
ENTOMOSTRACA .....	-----	-----	-----	-----	*	-----
SPORES .....	2	15	-----	2	-----	-----

## SUMMARY.

	Feb.	April.	June.	Aug.	Oct.	Dec.
Diatomaceæ .....	10	95	1660	106	3030	2160
Desmidiaceæ .....	-----	-----	100	20	10	10
Protococcoideæ .....	4	15	180	248	905	155
Conjugatæ .....	-----	-----	20	2	-----	-----
Confervaceæ .....	-----	-----	110	-----	-----	-----
Fungi .....	-----	20	-----	-----	-----	-----
Protozoa .....	194	120	1640	194	25	375
Rotifera .....	-----	*	-----	*	-----	-----
Entomostraca .....	-----	-----	-----	-----	*	-----
Spores .....	2	15	-----	2	-----	-----

No. 2.—DANBURY, UPPER KOHANZA RESERVOIR. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.			Residue on Evaporation.			Nitrogen of					Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.	Color.	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammonia, filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1251	Feb. 26	Distinct.	Very scanty.	.2	36.0	23.5	12.5	2.20	0.022	0.256	0.000	0.04	8.	4.75
1283	April 15	Slight.	None.	.3	46.5	30.0	16.5	3.20	.046	.312	.000	.04	8.	3.80
1324	June 11	Distinct.	Moderate.	.4	43.0	24.0	19.0	2.25	.010	.234	.000	.02	8.	4.70
1373	Aug. 18	Slight.	Small.	.4	45.5	25.5	20.0	3.30	.028	.194	.000	.02	9.	3.20
1431	Oct. 21	Distinct.	Small.	.4	42.5	23.5	19.0	2.20	.032	.252	.000	.02	10.	5.15
1462	Dec. 9	Slight.	Scanty.	.2	42.0	26.0	16.0	2.20	.026	.200	.000	.10	8.	3.65
			Average,	.3	42.6	25.4	17.2	2.56	.027	.241	.000	.06	8.	4.21

REMARKS.—The odor was described as slight, mouldy in No. 1283, and as none in the other samples.

NO. 2.—DANBURY, UPPER KOHANZA. MICROSCOPICAL EXAMINATION,  
1896.

Figures show average number of organisms per cubic centimeter of water.

\* indicates present in small numbers.

	Feb.	April.	June.	Aug.	Oct.	Dec.
DIATOMACEÆ—						
Achnanthes .....	152	-----	10	-----	115	70
Gomphonema .....	2	-----	10	-----	-----	-----
Synedra .....	-----	4	70	4	25	180
Tabellaria .....	-----	-----	95	-----	-----	-----
Asterionella .....	-----	-----	-----	-----	2290	70
Nitzschia .....	-----	-----	-----	-----	275	60
Cocconeia .....	-----	-----	-----	-----	5	-----
Navicula .....	-----	-----	-----	-----	5	-----
DESMIDIACEÆ—						
Staurostrum .....	-----	-----	15	-----	5	10
Closterium .....	-----	-----	*	-----	-----	-----
Xanthidium .....	-----	-----	-----	18	-----	-----
Euastrum .....	-----	-----	-----	-----	5	-----
PROTOCOCCOIDEÆ—						
Raphidium .....	26	24	5	-----	15	-----
Pediastrum .....	-----	-----	5	-----	-----	-----
Scenedesmus .....	-----	-----	-----	-----	20	-----
Green cells unidentified	-----	-----	90	4	-----	-----
CYANOPHYCEÆ—						
Anabaena .....	-----	-----	-----	2	-----	-----
Sphaerozyga .....	-----	-----	-----	-----	5	-----
FUNGI .....	-----	2	-----	-----	-----	-----
PROTOZOA—						
Peridinium .....	18	2	-----	20	*	-----
Eudorina .....	18	-----	-----	-----	-----	-----
Trachelomonas .....	20	34	-----	18	810	5
Phacus .....	-----	-----	-----	4	5	-----
Pandorina .....	-----	-----	-----	2	-----	-----
Euglena .....	-----	-----	-----	-----	*	-----
"499" .....	4	-----	-----	-----	-----	10
Infusoria unidentified	-----	-----	-----	4	-----	190
ROTIFERA—						
Triarthra .....	-----	-----	-----	2	-----	-----
ENTOMOSTRACA—						
Bosmina .....	-----	5	-----	-----	-----	-----
Unidentified .....	-----	-----	5	-----	-----	-----
SPORES .....	76	52	5	2	-----	-----

## SUMMARY.

	Feb.	April.	June.	Aug.	Oct.	Dec.
Diatomaceæ .....	154	4	185	4	2715	380
Desmidiaceæ .....	-----	-----	15	18	10	10
Protococcoideæ .....	26	24	100	4	35	-----
Cyanophyceæ .....	-----	-----	-----	2	5	-----
Fungi .....	-----	2	-----	-----	-----	-----
Protozoa .....	60	36	-----	48	815	205
Rotifera .....	-----	-----	-----	2	-----	-----
Entomostraca .....	-----	5	5	-----	-----	-----
Spores .....	76	52	5	2	-----	-----

No. 3.—DANBURY, BOGG'S POND. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.			Residue on Evaporation.			Chlorine.	Nitrogen of				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.	Color.	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1252	Feb. 26	Distinct.	Very scanty.	.2	36.0	19.5	16.5	2.35	0.06	0.324	0.000	0.04	8.	3.90
1286	April 21	Distinct.	Small.	.3	33.5	20.5	13.0	2.60	.038	.276	.000	.05	10.	2.85
1325	June 11	Slight.	Very scanty.	.3	34.0	21.5	12.5	2.70	.044	.288	.000	.04	6.	4.75
1374	Aug. 18	Slight.	Very scanty.	.3	45.0	24.0	21.0	2.30	.022	.188	.000	.02	8.	3.80
1432	Oct. 21	Distinct.	Scanty.	.3	33.0	19.5	13.5	1.90	.046	.240	.000	.02	7.	4.65
1463	Dec. 9	Slight.	Small.	.2	33.0	20.5	12.5	2.00	.048	.230	.000	.10	7.	3.60
			Average,	.3	35.7	20.9	14.8	2.31	.034	.258	.000	.05	8.	3.93

REMARKS.—The odor was described as little or none in all of the samples.



## No. 3.--DANBURY, BOGG'S POND. MICROSCOPICAL EXAMINATION, 1896.

Figures show average number of organisms per cubic centimeter of water.

\* indicates present in small numbers.

	Feb.	April.	June.	Aug.	Oct.	Dec.
DIATOMACEÆ—						
Synedra .....	42	406	—	4	10	335
Achnanthes .....	74	24	45	38	6	—
Gomphonema .....	4	6	—	—	—	—
Cocconeia .....	2	—	—	—	—	5
Meridion .....	—	2	—	—	—	—
Asterionella .....	—	66	—	—	—	*
Tabellaria .....	—	94	—	—	—	95
Navicula .....	—	14	5	2	—	5
Encyonema .....	—	2	—	—	—	—
Epithemia .....	—	—	—	—	—	5
Cyclotella .....	—	—	—	—	—	5
DESMIDIACEÆ—						
Cosmarium .....	—	2	—	—	—	—
Staurastrum .....	—	4	—	6	2	20
Euastrum .....	—	2	—	—	—	—
Sphærozosma .....	—	—	—	38	—	—
PROTOCOCCOIDEÆ—						
Raphidium .....	2	8	—	—	2	—
Protococcus .....	2	—	—	—	—	—
Scenedesmus .....	—	8	—	—	—	—
" 775 " .....	—	10	—	—	—	—
Green cells unidentified .....	—	6	110	—	—	—
CONFERVACEÆ—						
Conferva .....	—	—	—	2	—	—
CYANOPHYCEÆ—						
Oscillaria .....	—	2	—	—	—	—
Celosphaerium .....	—	—	—	4	—	—
FUNGI—						
Leptothrix .....	—	—	—	2	—	—
Crenothrix .....	—	—	—	—	2	—
Zoöglæa .....	—	—	10	—	—	—
PROTOZOA—						
Dinobryon .....	870	30	175	12	126	1070
Peridinium .....	16	2	—	24	6	—
Actinophrys .....	—	4	—	—	—	—
Euglypha .....	—	2	—	—	—	—
Trachelomonas .....	—	—	—	6	6	5
Diffugia .....	—	—	—	2	—	—
" 499 " .....	—	6	—	—	4	—
Infusoria unidentified .....	—	10	—	—	—	—
ROTIFERA—						
Polyarthra .....	*	—	—	*	2	—
Anurea .....	—	—	—	4	—	*
Unidentified .....	14	—	5	—	—	—
SPORES .....	—	—	—	—	2	—

## SUMMARY.

	Feb.	April.	June.	Aug.	Oct.	Dec.
Diatomaceæ .....	122	614	50	44	16	450
Desmidiaceæ .....	—	8	—	44	2	20
Protococcoideæ .....	4	32	110	—	2	—
Confervaceæ .....	—	—	—	2	—	—
Cyanophyceæ .....	—	2	—	4	—	—
Fungi .....	—	—	10	2	2	—
Protozoa .....	886	54	175	44	142	1075
Rotifera .....	14	—	5	4	2	*
Spores .....	—	—	—	—	2	—

## ANALYSES OF GREENWICH WATER SUPPLY.

The samples were taken by Mr. T. E. Chard, who has charge of the filters, under the direction of Mr. John Dayton of the Greenwich Water Co.

The samples were taken at the filter house, one set being of the water before passing through the filters and one set of filtered water. In all cases the water was taken from the new reservoir, Rockwood Lake.

The following summary of averages shows the most interesting of the results bearing on the efficiency of the filtration :

	Residue on Evaporation.			Nitrogen of	Oxygen Consumed.
	Total at 100° C.	Non-volatile, Mineral.	Volatile, Organic.	Albuminoid Ammonia.	
Unfiltered Samples,-----	53.8	36.4	17.4	0.274	4.78
Same filtered through paper,--	49.8	34.2	15.6	.246	---
Filtered Samples,-----	48.5	33.7	14.8	.212	4.13
Removed by Filters,-----	5.3	2.7	2.6	.062	.65
“ “ “ -----	9.8%	7.4%	15.1%	22.6%	13.5%

The beneficial results are seen, as is to be expected, chiefly in the data concerning the organic matter, and in each case more was removed by the sand filtration than by the filter paper ; the percentages removed in the case of albuminoid ammonia being 22.6% and 10.2% respectively. The physical properties of the water are very much improved by the filtration and a marked improvement is effected in the chemical composition. The organic matter of the water at the reservoirs is large, however, and even after the filtration it is greater than the average of Connecticut drinking water. From 12 to 15 pounds of alum are used daily for a consumption of about 1,250,000 gallons. A larger use of alum would doubtless have resulted in a still greater reduction of the organic matter.

# GREENWICH—NO. 1, ROCKWOOD LAKE, NOT FILTERED. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evaporation.						Chlorine.	Nitrogen of					Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
					Total at 100° C.		Non-Volatile, Mineral.		Volatile, Organic.			Free Ammonia, not filtered.	Albuminoid Ammonia.		Nitrates.	Nitrates.		
					Filtered.*	Unfiltered.	Filtered.*	Unfiltered.	Filtered.*	Unfiltered.			Filtered.*	Unfiltered.				
1234	Jan. 25	Clear.	None.	.4	55.5	58.0	45.0	47.0	10.5	11.0	0.028	0.270	0.288	0.004	0.10	20.	5.2	
1248	Feb. 24	Distinct.	Scanty.	.3	58.0	65.0	41.0	43.5	17.0	21.5	.014	.258	.296	.002	.20	18.	4.45	
1266	Mar. 20	Slight.	Very scanty.	.3	49.5	54.0	37.0	38.0	12.5	16.0	.03	.244	.312	.002	.20	18.	4.8	
1284	Apr. 16	Clear.	None.	.3	43.0	45.0	29.5	31.0	13.5	14.0	.030	.216	.232	.002	.15	15.	3.95	
1302	May 21	Distinct.	Scanty.	.3	41.0	43.0	31.0	30.0	10.0	13.0	.032	.254	.294	.000	.10	15.	5.5	
1318	June 16	Distinct.	Moderate.	.3	44.5	52.0	32.0	37.5	12.5	14.5	.028	.244	.284	.006	.08	14.	4.15	
1342	July 9	Distinct.	Very scanty.	.2	52.0	53.5	32.5	34.0	19.5	19.5	.038	.174	.212	.000	.02	14.	4.15	
1377	Aug. 18	Distinct.	Scanty.	.2	51.5	59.0	32.5	37.5	19.0	21.5	.028	---	.222	.000	.03	18.	4.4	
1407	Sept. 25	Slight.	Scanty.	.4	55.0	56.5	35.0	36.0	20.0	20.5	.080	.242	.274	.000	.03	19.	6.10	
1433	Oct. 23	Distinct.	Scanty.	.4	51.0	54.5	32.5	36.0	18.5	18.5	.100	.264	.296	.000	.04	19.	5.30	
1450	Nov. 18	Slight.	Very scanty.	.3	49.0	50.0	30.0	31.0	19.0	19.0	.024	.298	.322	.000	.02	17.	4.7	
1465	Dec. 16	Slight.	Scanty.	.3	47.5	55.0	32.0	35.0	15.5	20.0	.038	.246	.254	.002	.08	19.	4.7	
			Average	.3	49.8	53.8	34.2	36.4	15.6	17.4	.036	.246	.274	.002	.09	17.	4.78	

REMARKS—No odor was observed in any of the samples.

\* Refer to water filtered through paper.

GREENWICH.—NO. 1, ROCKWOOD LAKE. NOT FILTERED. MICROSCOPICAL  
EXAMINATION, 1896.

Figures show the average number of organisms per cubic centimeter of water.

\* indicates present in small numbers.

	Jan.	Feb.	Mar.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
DIATOMACEÆ—												
Synedra	632	20	44	718	320	112				6	6	
Achnanthes			2				60	6		30	6	
Nitzschia			2		28	12			142	24	4	
Tabellaria				6		2						
Navicula				6	6							
Meridion				2								
Ceratoneis					2							
Melosira							6			8		
Cyclotella								2				
Asterionella										*		
DESMIDIACEÆ—												
Staurostrum		2						24	12	22		
Closterium						2						
Sphaerzosma								4				
Cosmarium									2			
Arthrodesmus							4		32			
PROTOCOCCOIDEÆ—												
Raphidium				2		2	2	40		16		
Scenedesmus						8			8			
Pediastrum							2					
Ophiocytium								4				
Dactylococcus									28			
Green cells unidentif'd		118		38		28						
CONFERVACEÆ—												
Conferva			2									
FUNGI—												
Sarcina										14		
PROTOZOA—												
Peridinium	162	242	108	14	2		2	6				
Dinobryon	42	4	2	78			4	2102	2490	60	396	
Chlorogonium			16									
Trachelomonas			2	2	12	2	6	34	2	2		
Coleps										6	14	
Glenodinium										2		
"499"					10					2		
Infusoria unidentified	2	118	18	28	8					46	12	
ROTIFERA—												
Anurea	*	*			*			2		2		
Polyarthra	*											
Triarthra										2		
Unidentified								2				
ENTOMOSTRACA—							*	*			*	
SPORES—				20			68					
OVA—							2					

Not examined.

SUMMARY.

	Jan.	Feb.	Mar.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Diatomaceæ	632	20	48	732	356	126	66	8	142	68	16	
Desmidiaceæ		2				2	4	28	46	22		
Protococcoideæ	118			40		38	4	44	36	16		
Conferveæ			2									
Fungi										14		
Protozoa	206	364	146	122	32	2	12	2142	2492	118	422	
Rotifera	*	*			*			4		4		
Entomostraca							*	*			*	
Spores				20			68					
Ova							2					

Not examined.

## GREENWICH—NO. 2, ROCKWOOD LAKE, FILTERED. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.			Residue on Evapo- ration.				Chlorine.	Nitrogen of				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.	Color.	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Free Ammonia, not filtered.		Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.			
1235	Jan. 25	Clear.	None.	.3	55.0	45.0	10.0	3.64	0.028	0.234	Trace.	0.15	20.	5.1	
1249	Feb. 24	Clear.	None.	.3	55.5	39.5	16.0	3.38	.018	.258	0.004	.20	20.	4.15	
1267	Mar. 20	Clear.	None.	.3	49.5	38.0	11.5	3.20	.040	.216	.002	.20	20.	4.1	
1285	Apr. 16	Clear.	None.	.2	43.0	29.5	13.5	3.25	.020	.200	.002	.20	17.	3.65	
1303	May 21	Slight.	None.	.3	41.0	30.0	11.0	3.50	.024	.216	.006	.10	16.	4.4	
1319	June 16	Clear.	None.	.2	44.5	33.0	11.5	3.80	.014	.164	.000	.10	15.	3.90	
1343	July 9	Clear.	None.	.2	45.5	27.5	18.0	3.40	.014	.160	.000	.02	14.	3.50	
1378	Aug. 18	Slight.	None.	.3	50.0	33.5	16.5	3.50	.000	.154	.000	.03	18.	3.35	
1408	Sept. 25	Clear.	None.	.2	52.0	34.5	17.5	3.80	.026	.228	.000	.03	19.	3.50	
1434	Oct. 23	Very slight.	None.	.3	50.5	32.5	18.0	3.20	.048	.232	.000	.06	20.	5.05	
1451	Nov. 18	Clear.	None.	.2	48.5	30.0	18.5	3.40	.024	.256	.000	.02	18.	4.85	
1466	Dec. 16	Clear.	None.	.2	47.5	32.0	15.5	3.40	.038	.220	.002	.08	19.	4.60	
			Average	.2	48.5	33.7	14.8	3.46	.025	.212	.001	.10	18.	4.13	

REMARKS.—No odor was observed in any of the samples.



## GREENWICH.—No. 2, ROCKWOOD LAKE. FILTERED. MICROSCOPICAL EXAMINATION, 1896.

Figures show the average number of organisms per cubic centimeter of water.

\* indicates present in small number.

	Jan.	Feb.	Mar.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
DIATOMACEÆ.												
Synedra .....	2			8	28	56	1	2	4	6		
Navicula .....			1			3		2				
Achnanthes .....				40		66	13	16	10	128	94	
Asterionella .....						2						
Melosira .....							3					
Cocconeia .....										2		
Cyclotella .....						1					4	
Tabellaria .....						2	1					
DESMIDIACEÆ—												
Euastrum .....		1							1			
Staurostrum .....								10	9	2		
Cosmarium .....						7					*	
Arthrodesmus .....									19	14		
PROTOCOCCOIDEÆ—												
Raphidium .....			5			3			2	8		
Protococcus .....				2								
Scenedesmus .....									8	8		
Green cells unidentif'd				6	1	26	3		24			
FUNGI—												
Sarcina .....										16		
Unidentified .....							1					
PROTOZOA—												
Peridinium .....	80	142	76	2			1					
Coleps .....												2
Dinobryon .....	1		4					18	16	2		
Trachelomonas .....	1			4	6	7	2	6	6	10	4	
Phacus .....							1					
Euglena .....								2				
Euglypha .....									1			
Glenodinium .....										2		
Vorticella .....											2	
"499" .....					1							
Infusoria unidentified	5	55	16					20	2	56	12	
ROTIFERA—												
Anurea .....	*											
Polyarthra .....	*			2	2							
SPORES—				28				4				

Not examined.

## SUMMARY.

	Jan.	Feb.	Mar.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Diatomaceæ .....	2		1	48	28	130	18	20	14	136	98	
Desmidiaceæ .....		1				7		10	29	16	*	
Protococcoideæ .....			5	8	1	29	3		34	16		
Fungi .....							1			16		
Protozoa .....	87	197	96	6	7	7	4	46	25	70	20	
Rotifera .....	*			2	2							
Spores .....				28				4				

Not examined.

# ANALYSES OF WATERBURY WATER SUPPLY.

The samples were furnished by Mr. R. A. Cairns, C.E., City Engineer. They were all drawn from faucets in the city; those for the first six months in the office at 65 Bank st., and the rest at 9 Leavenworth st.

WATERBURY CITY WATER. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.			Residue on Evaporation.		Chlorine.	Nitrogen of				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.	
		Turbidity.	Sediment.	Color.	Total at 100° C.	Non-Volatile, Mineral.		Volatile, Organic.	Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrates.			Nitrites.
1239	1896 Jan. 29	Slight.	None.	.3	38.5	30.0	8.5	1.8	0.022	0.082	0.002	0.17	10.	3.00
1247	Feb. 19	Clear.	None.	.4	27.0	18.5	8.5	1.50	.024	.090	.002	.08	7.	3.25
1272	Mar. 25	Slight.	None.	.2	37.0	24.5	12.5	1.45	.030	.120	.002	.15	5.	2.95
1290	April 22	Distinct.	Very scanty.	.4	35.0	22.5	12.5	2.05	.012	.090	.002	.15	7.	3.50
1307	May 20	Clear.	Scanty.	.4	37.0	21.0	16.0	1.70	.014	.142	.004	.04	7.	4.3
1329	June 15	Slight.	Scanty.	.4	45.5	28.0	17.5	1.80	.038	.152	.002	.05	12.	4.05
1350	July 16	Slight.	Very scanty.	.6	55.0	27.5	27.5	1.80	.072	.136	.002	.05	13.	5.55
1386	Aug. 25	Distinct.	Small.	.8	42.5	24.0	18.5	2.50	.046	.156	.000	.06	12.	3.75
1398	Sept. 15	Distinct.	Scanty.	.4	61.5	30.0	31.5	2.54	.036	.366	.002	.05	5.	5.40
1423	Oct. 13	Marked.	Scanty.	.5	47.0	28.5	18.5	1.90	.052	.212	.000	.06	5.	6.35
1447	Nov. 11	Slight.	Scanty.	.6	44.5	29.5	15.0	2.25	.044	.152	.000	.10	8.	6.7
1460	Dec. 9	Slight.	Very scanty.	.4	44.0	32.0	12.0	2.15	.018	.108	.000	.08	11.	5.35
			Average,	.5	42.8	26.3	16.5	1.95	.034	.161	.002	.09	9.	4.51

REMARKS.—The odor was described as slight, fishy in No. 1307, as slight mouldy in No. 1398, and as none in the other samples.



## THE NAUGATUCK RIVER.

The samples were taken each month from the same four points in the river as in previous years, these being as follows :

No. 1, West Torrington.—The samples were taken by Mr. Alfred C. Hopkins, of Torrington, at the bridge near the house of Mr. Hurlburt Hayes, about two miles above Torrington and above all direct sewage contamination.

No. 2, East Litchfield.—The samples were obtained by Mr. A. P. Garrigus, of the East Litchfield railway station, from the pond connected with the paper mill. This station is about two miles below the outfall of the Torrington sewer.

No. 3, Union City.—The samples were obtained by Mr. C. B. Fuller, of Union City, and were taken from a point about four hundred feet above the bridge. This station is about three miles and a half below Waterbury.

No. 4, Ansonia.—The samples were taken by Mr. E. C. Smith, just above the covered bridge from off the rocks on the east side. This station is about twelve miles below No. 3.

NO. 1.—WEST TORRINGTON. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment	Color Filtered.	Residue on Evapo- ration.				Nitrogen of					Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
					Total at 100° C.	Non-Volatile,	Volatile, Mineral.	Organic.	Free Ammonia, not filtered.	Albuminoid Am- monia, filtered.	Albuminoid Am- monia, not filtered.	Nitrates.	Nitrites.		
1230	1896 Jan. 9	Clear.	None.	.3	45.0	30.0	16.0	1.80	0.024	0.094	0.104	0.002	0.15	18.	3.72
1240	Feb. 5	Clear.	None.	.3	41.0	27.0	14.0	1.65	.018	.078	.080	.000	.10	12.	2.55
1262	Mar. 10	Clear.	Very scanty.	.3	35.5	22.5	13.0	1.40	.016	.082	.090	.006	.12	8.	2.55
1275	Apr. 2	Clear.	None.	.4	30.0	16.5	13.5	1.30	.022	.100	.104	.000	.08	8.	3.65
1296	May 6	Clear.	None.	.4	39.0	27.0	12.0	1.65	.012	.102	.124	.002	.05	10.	4.00
1313	June 3	Clear.	Scanty.	.4	48.0	34.0	14.0	1.55	.020	.182	.194	.000	.10	14.	5.00
1338	July 3	Slight.	Scanty.	.4	58.5	42.5	16.0	2.20	.060	.156	.180	.000	.02	17.	3.5
1363	Aug. 4	Slight.	Very scanty.	.6	60.0	33.5	26.5	1.90	.026	.192	.214	.000	.04	18.	7.25
1389	Sept. 1	Slight.	Scanty.	.5	47.5	34.0	13.5	2.30	.024	.146	.166	.002	.04	18.	4.65
1409	Oct. 2	Clear.	None.	.6	51.0	34.0	17.0	1.65	.038	.184	.200	.000	.04	13.	8.6
1440	Nov. 4	Slight.	Very scanty.	.4	44.0	29.0	15.0	1.50	.022	.124	.142	.000	.04	14.	5.50
1453	Dec. 2	Clear.	Very scanty.	.4	59.0	42.5	16.5	1.80	.024	.122	.156	.002	.08	14.	5.2
			Average,	.4	46.6	31.0	15.6	1.72	.026	.130	.133	.001	.07	14.	4.68

REMARKS.—The odor was recorded as none, or slight, mouldy.



## NO. 2.—EAST LITCHFIELD. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evapo- ration.			Chlorine.	Nitrogen of					Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
					Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid Ammonia, filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1231	1896 Jan. 9	Distinct.	Small.	.3	55.5	39.0	16.5	2.05	0.052	0.176	0.216	0.008	0.34	10.	5.55
1241	Feb. 5	Distinct.	Scanty.	.3	50.0	36.0	14.0	2.60	.080	.160	.244	.008	.30	15.	4.15
1263	Mar. 10	Slight.	Very scanty.	.4	47.5	33.5	14.0	2.10	.030	.092	.110	.004	.26	9.	3.30
1276	Apr. 1	Slight.	Scanty.	.4	30.5	17.0	13.5	1.55	.024	.154	.168	.000	.10	8.	4.10
1297	May 6	Distinct.	Small.	.4	55.0	35.0	20.0	2.80	.028	.168	.242	.008	.15	15.	4.45
1314	June 3	Distinct.	Scanty.	.5	62.5	42.5	20.0	2.35	.040	.260	.276	.008	.20	14.	7.55
1339	July 1	Distinct.	Scanty.	.5	61.0	42.0	19.0	3.40	.144	.228	.290	.010	.20	16.	4.35
1364	Aug. 4	Distinct.	Scanty.	.5	71.0	41.0	30.0	2.89	.200	.140	.364	.006	.24	17.	6.70
1388	Sept. 1	Distinct.	Small.	.5	57.5	36.5	21.0	4.40	.210	.206	.270	.014	.20	18.	5.60
1410	Oct. 1	Slight.	Moderate.	.8	53.5	28.5	25.0	2.20	.058	.274	.306	.002	.05	15.	10.20
1441	Nov. 4	Distinct.	Scanty.	.5	60.5	41.0	19.5	3.15	.036	.196	.250	.018	.15	18.	5.30
1454	Dec. 2	Marked.	Scanty.	.5	56.0	38.5	17.5	2.40	.032	.212	.242	.008	.20	14.	6.50
			Average,	.5	55.0	35.9	19.1	2.66	.075	.189	.248	.008	.20	14.	5.64

REMARKS.—The odor was recorded as none in 1263 and 1276, distinctly musty in 1297, 1339, 1364, 1388, 1410 and 1441, and slightly musty in the rest.

No. 3.—UNION CITY. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, unfiltered.	Residue on Evaporation.			Chlorine.	Nitrogen of					Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
					Total at 100° C.	Non-Volatile,	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid Ammonia, filtered.	Albuminoid Ammonia, not filtered.	Nitrates.	Nitrates.		
1232	1896 Jan. 9	Slight.	Small.	.2	48.5	33.5	15.0	2.35	0.066	0.130	0.146	0.006	0.40	10.	2.85
1242	Feb. 5	Distinct.	Scanty.	.3	57.0	43.0	14.0	3.25	.220	.202	.252	.018	.45	15.	4.80
1264	May 10	Distinct.	Scanty.	.3	41.0	26.0	15.0	2.50	.060	.156	.168	.006	.28	10.	3.05
1277	April 1	Distinct.	Scanty.	.3	31.5	16.0	15.5	1.90	.064	.158	.188	.010	.15	7.	3.60
1298	May 6	Slight.	Scanty.	.4	48.5	31.5	17.0	3.00	.016	.162	.192	.008	.25	10.	3.70
1315	June 3	Distinct.	Scanty.	.5	59.0	30.0	29.0	2.90	.076	.240	.282	.010	.35	10.	5.85
1340	July 1	Distinct.	Scanty.	.5	76.0	55.5	20.5	5.80	.366	.274	.408	.028	.30	19.	4.00
1365	Aug. 4	Marked.	Scanty.	.5	79.5	54.5	25.0	6.20	.308	.344	.440	.020	.52	22.	5.05
1390	Sept. 1	Marked.	Scanty.	.6	76.0	56.0	20.0	7.50	.728	.360	.474	.024	.40	22.	4.85
1411	Oct. 1	Distinct.	Moderate.	.5	52.5	31.0	21.5	3.05	.048	.210	.276	.004	.10	12.	7.15
1442	Nov. 4	Distinct.	Small.	.5	66.5	45.0	21.5	4.40	.054	.258	.406	.048	.40	18.	5.55
1455	Dec. 3	Marked.	Small.	.4	57.0	40.0	17.0	3.60	.070	.180	.022	.016	.30	12.	4.70
			Average,	.4	57.8	38.5	19.3	3.87	.152	.223	.271	.017	.33	14.	4.60

REMARKS.—The odor was recorded as none in 1232 and 1264, distinctly musty in 1242, 1298, 1365, 1390, 1411 and 1442, slightly musty in the rest.

NO. 4.—ANSONIA. CHEMICAL EXAMINATION.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evaporation.				Nitrogen of					Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
					Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammonia, not filtered.	Albuminoid Ammonia, filtered.	Albuminoid Ammonia, not filtered.	Nitrates.	Nitrites.		
1233	1896 Jan. 9	Slight.	None.	.4	48.0	30.5	17.5	3.6	0.052	0.116	0.122	0.002	0.15	10.	4.85
1243	Feb. 5	Distinct.	Small.	.3	51.5	36.5	15.0	3.10	.064	.156	.222	.018	.35	13.	3.8
1265	Mar. 12	Distinct.	Scanty.	.3	46.5	32.5	14.0	2.40	.042	.162	.172	.012	.35	10.	3.05
1278	April 1	Slight.	Scanty.	.3	36.0	21.5	14.5	1.80	.032	.182	.20	.006	.20	7.	3.55
1299	May 6	Distinct.	Scanty.	.4	52.5	34.0	18.5	3.50	.068	.168	.206	.014	.25	12.	3.55
1316	June 3	Distinct.	Scanty.	.4	57.5	35.5	22.0	3.30	.112	.21	.254	.010	.35	10.	5.3
1341	July 1	Distinct.	Scanty.	.5	64.5	48.5	16.0	4.90	.152	.224	.266	.080	.25	14.	3.75
1366	Aug. 4	Marked.	Scanty.	.6	75.0	58.5	16.5	6.00	.152	.212	.256	.008	.21	22.	5.
1391	Sept. 1	Marked.	Scanty.	.5	73.5	53.5	20.0	6.50	.086	.226	.326	.006	.35	23.	4.90
1412	Oct. 1	Distinct.	Scanty.	.6	67.0	43.5	23.5	5.20	.326	.274	.314	.014	.33	14.	6.55
1443	Nov. 4	Slight.	Scanty.	.5	59.5	38.5	21.0	4.25	.156	.220	.254	.010	.25	15.	5.30
1456	Dec. 2	Slight.	Small.	.4	47.0	31.5	15.5	3.80	.018	.166	.210	.002	.15	11.	4.7
			Average,	.4	56.5	38.7	17.8	4.03	.105	.193	.234	.015	.27	13.	4.53

REMARKS.—The odor was recorded as none in 1233, mouldy in 1443, distinctly musty in 1265, 1341, 1366 and 1391, slightly musty in the rest.

No. 1.—WEST TORRINGTON.

Year.	Color.	Residue on Evaporation.			Chlorine.	Nitrogen of					Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile,	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid, filtered.	Albuminoid, not filtered.	Nitrites.	Nitrates.		
1894	0.3	42.0	29.2	12.8	1.47	0.021	0.155	0.160	0.0000	0.06	18.	4.45
1895	.3	50.0	34.5	15.5	1.73	.022	.131	.140	.0007	.07	15.	4.10
1896	.4	46.6	31.0	15.6	1.72	.026	.130	.133	.0010	.07	14.	4.68
Average	.3	46.2	31.6	14.6	1.64	.023	.139	.144	.0006	.07	16.	4.41

No. 2.—EAST LITCHFIELD.

1894	0.3	47.3	32.6	14.7	2.44	.041	.243	.276	.005	.19	18.	4.96
1895	.4	56.4	37.5	18.9	2.84	.052	.207	.237	.008	.21	16.	5.30
1896	.5	55.0	35.9	19.1	2.66	.075	.189	.248	.008	.20	14.	5.64
Average	.4	52.9	35.3	17.6	2.65	.056	.213	.254	.007	.20	16.	5.30

No. 3.—UNION CITY.

1894	0.3	48.6	35.5	13.1	3.73	.080	.218	.265	.009	.29	17.	4.25
1895	.4	59.4	39.0	20.4	3.74	.141	.232	.288	.023	.44	15.	4.90
1896	.4	57.8	38.5	19.3	3.87	.152	.223	.271	.017	.33	14.	4.60
Average	.4	55.3	37.7	17.6	3.78	.124	.224	.275	.016	.35	15.	4.58

No. 4.—ANSONIA.

1894	0.35	49.5	35.4	14.1	3.99	.084	.219	.263	.0070	.30	17.	4.33
1895	.40	60.4	41.8	18.6	3.77	.136	.223	.290	.0105	.29	13.5	4.85
1896	.40	56.5	38.7	17.8	4.03	.105	.193	.234	.0150	.27	13.	4.53
Average	.40	55.5	38.6	16.8	3.93	.108	.212	.262	.0108	.29	14.5	4.57

## QUINNIPIAC RIVER.

Samples were taken each month from May to October inclusive, at four stations as given below. Nos. 1, 2 and 3 were all in the vicinity of Meriden, and the samples were collected by Mr. A. B. Butler of that city.

No. 1.—This station is on Quinnipiac River, at a point on the left bank just above the Red Bridge, which is the first bridge above Hanover Pond.

No. 2.—The station is on Harbor Brook, at a point on the west side, just below Rice's Bridge, and only a short distance from where the brook joins the river.

No. 3.—This station is in South Meriden, at a point on the west side of the Meriden Cutlery Co.'s canal just after leaving Hanover Pond.

No. 4.—This station is on the river at Quinnipiac, and on the east side just below the bridge.



No. 1.—RED BRIDGE. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evaporation.						Nitrogen of			
					Total at 100° C.		Non-Volatile Mineral.		Volatile Organic.		Free Ammonia, not filtered.	Total Organic.		Nitrates.
					Filtered.	Unfiltered.	Filtered.	Unfiltered.	Filtered.	Unfiltered.		Filtered.	Unfiltered.	
1309	Mar. 29	Distinct.	Small.	.5	63.0	--	41.5	--	21.5	--	0.042	0.478	0.498	0.15
1334	June 24	Slight.	Very scanty.	.6	70.0	71.0	49.0	49.5	21.0	21.5	.038	.422	.462	.25
1357	July 30	Clear.	Very scanty.	.3	67.5	68.0	57.5	56.5	10.0	11.5	.038	.562	.612	.04
1384	Aug. 25	Slight.	Very scanty.	.3	76.0	79.5	62.5	64.5	13.5	15.0	.044	.206	.456	.10
1403	Sept. 22	Slight.	Scanty.	.5	70.5	71.5	54.0	54.5	16.5	17.0	.042	.358	.458	.10
1435	Oct. 27	Clear.	Very scanty.	.6	67.5	68.5	50.0	50.0	17.5	18.5	.034	.316	.366	.10
			Average,	.5	69.1	71.7	52.4	55.0	16.6	16.7	.040	.390	.475	.12

REMARKS.—There was no odor recorded in any of the samples.

## No. 2.—HARBOR BROOK. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evaporation						Nitrogen of			
					Total at 100° C.		Non-Volatile, Mineral.		Volatile, Organic.		Free Ammonia, not filtered.	Total, Organic.		Nitrates.
					Filtered.	Unfiltered.	Filtered.	Unfiltered.	Filtered.	Unfiltered.		Filtered.	Unfiltered.	
1310	May 29	Very marked.	Much.	.7	168.0	220.0	122.5	160.0	45.5	60.0	0.402	2.098	2.348	1.19
1335	June 24	Distinct.	Small.	.6	136.5	145.0	107.0	110.5	29.5	34.5	.516	.784	.884	.65
1358	July 28	Distinct.	Small.	.9	185.0	193.5	149.0	149.5	36.0	44.0	1.024	1.476	1.726	.75
1385	Aug. 25	Marked.	Much.	--	211.5	229.0	166.5	172.5	45.0	56.5	.528	5.022	6.022	.40
1404	Sept. 22	Marked.	Much.	.5	283.5	336.5	240.0	251.5	43.5	85.0	.132	2.018	2.468	.50
1436	Oct. 27	Moderate.	Small.	.6	177.0	179.0	134.5	135.5	43.5	43.5	.168	1.520	1.62	.74
			Average,	.7	193.6	217.2	153.3	163.2	40.3	54.0	.461	2.153	2.511	.71

REMARKS.—The odor was recorded as distinctly musty in all, with the odor of gas tar in 1310, 1358 and 1404.

No. 3.—SOUTH MERIDEN. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evaporation.						Nitrogen of			
					Total at 100° C.		Non-Volatile, Mineral.		Volatile, Organic.		Free Ammonia, not filtered.	Total, Organic.		Nitrates.
					Filtered.	Unfiltered.	Filtered.	Unfiltered.	Filtered.	Unfiltered.		Filtered.	Unfiltered.	
1311	May 29	Marked.	Small.	.6	82.5	88.0	62.5	69.5	20.0	18.5	0.162	0.478	0.538	0.25
1336	June 24	Distinct.	Scanty.	.6	82.0	90.0	57.5	63.0	24.5	27.0	.196	.644	.704	.40
1359	July 28	Slight.	Scanty.	.3	86.5	86.0	68.0	67.5	18.5	18.5	.358	.342	.442	.15
1383	Aug. 25	Slight.	Scanty.	.4	96.0	90.0	75.0	72.5	21.0	17.5	.280	.320	.470	.10
1405	Sept. 22	Marked.	Moderate.	.5	78.5	90.5	62.0	70.5	16.5	20.0	.198	.502	.642	.15
1437	Oct. 27	Distinct.	Scanty.	.5	83.5	86.0	59.5	60.5	24.0	25.5	.316	.484	.634	.20
			Average,	.5	84.8	88.4	64.1	67.2	20.7	21.2	.252	.462	.572	.21

REMARKS.—The odor was described as none in 1383, distinctly musty or slightly musty in the rest.

No. 4.--QUINNIPIAC. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evaporation.						Nitrogen of				
					Total at 100° C.		Non-Volatile, Mineral.		Volatile, Organic.		Free Ammonia, not filtered.	Total, Organic.		Nitrates.	
					Filtered.	Unfiltered.	Filtered.	Unfiltered.	Filtered.	Unfiltered.		Filtered.	Unfiltered.		
1312	May 29	Distinct.	Moderate	.4	76.5	88.0	59.0	69.5	17.5	18.5	0.094	0.586	0.626	0.014	0.30
1337	June 24	Distinct.	Scanty.	.6	78.5	84.5	56.0	61.0	22.5	23.5	.074	.466	.506	.014	.30
1360	July 28	Slight.	Scanty.	.3	98.0	99.0	80.0	76.5	18.0	22.5	.060	.590	.590	.010	.25
1387	Aug. 26	Distinct.	Scanty.	.4	100.0	105.0	81.5	85.0	18.5	20.0	.032	.468	.718	.006	.18
1406	Sept. 12	Slight.	Very scanty.	.5	84.0	89.0	68.5	72.0	15.5	17.0	.072	.678	1.178	.014	.30
1438	Oct. 27	Moderate.	Scanty.	.5	95.0	97.0	67.0	68.5	28.0	28.5	.112	.438	.538	.018	.28
			Average,	.5	88.7	93.8	68.7	72.1	20.0	21.7	.074	.538	.693	.011	.27

REMARKS.—The odor was described as none in 1387, mouldy in 1406 and 1438, distinctly musty or slightly musty in the other three.

## THE HOCKANUM RIVER.

The Hockanum River is dammed by a masonry dam, twenty-six feet high, a short distance above the city of Rockville, to form Shenipsit Lake. Below this point the river flows through the city with a rapid fall through several mill-ponds which are used for power by the mills of the city. Below Rockville the fall is not great and the flow comparatively slow. The distance from Shenipsit Lake to the Connecticut River is about seventeen miles. The chief tributaries of the river are, the Tankanhoosen, which joins it about ten miles below the lake, at a point a short distance above the village of North Manchester, and the South Branch, or Hop Brook, emptying about a mile and a half below the Tankanhoosen.

As calculated from the State topographical map, the areas of watershed are as follows :

## AREAS OF THE HOCKANUM WATERSHED.

Above Shenipsit Dam.....	16.56 sq. miles.
Water surface of Shenipsit Lake about.....	1. "
Below Shenipsit Dam (including branches) .....	66.94 "
Total watershed .....	83.5 "
The Tankanhoosen.....	11.91 "
South Branch.....	13.0 "
Above Union Co. Pond, North Manchester .....	53.51 "

The flow of the river is abnormal, because of the storage of the flow from the upper watershed and its irregular discharge for the use of the mills at Rockville. About 15,000,000 gallons are discharged daily during working hours, and practically none during the night and on those days on which the mills are closed.

The pollution of the stream which occurs at Rockville is chiefly from the woolen mills and from a number of small sewers discharging house drainage and street washings. In the new sewage system it is proposed to discharge the unpurified sewage into the rivers a short distance below the city.

Below Rockville the pollution is chiefly from woolen and paper mills located on the Tankanhoosen and near North Manchester and Burnside, and from the silk mills and sewage system at South Manchester located on the South Branch.

Data concerning the character of the pollution of this stream have already been published (see Conn. B. of H. Reports, Tenth,



p. 250-262, Eleventh, p. 254). The analyses which have been made during 1895 and '96 show that the contamination is already considerable, and likely to soon become excessive with the growth of the population of the towns draining into the river.

Below are given the results of the examinations of samples during 1896, with the averages of those for 1895. Analyses of samples from the Tankanhoosen and South Branch may be found in the Eighteenth Annual Report, page 225.

#### CHEMICAL EXAMINATION HOCKANUM RIVER 1896.

The samples for analysis were taken each month, from May to October, inclusive, at three stations on the river, as follows :—

No. 1.—The station was located at the bridge where the river crosses the road a short distance from the Windemere Mills. The distance below Rockville is about a mile and three-quarters. The samples taken here were composite, being a mixture of small samples, equal in amount, taken during the day at the following hours : 5 P. M., 7 P. M., 7 A. M., 9 A. M., 11 A. M., 1 P. M., 3 P. M. They were collected by Mr. M. A. Regan of Rockville.

No. 2.—This station is located in North Manchester at the pond just above the Oakland Mills, about 6 miles below No. 1. The samples were collected by Mr. E. M. Andrews of North Manchester, and were taken at various hours between 10 A. M. and 3 P. M.

No. 3.—This station was at Walker's Mill Pond in Burnside, a point about  $6\frac{1}{4}$  miles below No. 2. The samples were collected by Mr. Geo. R. Walker of Burnside, and were taken at various hours as in No. 2.

No. 1.—WINDEMERE. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evaporation.						Nitrogen.			
					Total at 100° C.		Non-Volatile, Mineral.		Volatile, Organic.		Of Free Ammonia, unfiltered.	Total, Organic.		Of Nitrates.
					Filtered.	Unfiltered.	Filtered.	Unfiltered.	Filtered.	Unfiltered.		Filtered.	Unfiltered.	
1300	May 13	Marked.	Much.	.4	59.0	105.0	38.0	65.0	21.0	40.0	0.060	0.740	1.34	0.010
1320	June 9	Marked.	Moderate.	.5	57.5	91.5	40.0	63.0	17.5	28.5	.022	.578	1.228	.010
1344	July 9	Distinct.	Moderate.	.4	67.5	94.5	43.5	58.0	24.0	36.5	.016	.534	.634	.006
1368	Aug. 10	Marked.	Much.	*	95.0	102.0	34.0	40.5	61.0	61.5	.316	.184	.534	.010
1392	Sept. 8	Marked.	Much.	*	71.5	91.5	45.0	59.0	26.5	32.5	.026	.834	.974	.006
1414	Oct. 6	Distinct.	Scanty.	.9	94.5	107.0	55.0	61.0	39.5	46.0	.032	.268	.768	.006
			Average,	--	74.2	98.6	42.6	57.8	31.6	40.8	.070	.521	.913	.008

REMARKS.—The odor was recorded as distinctly musty in all the samples.

\* Discolored with dyes.

## No. 2.—NORTH MANCHESTER. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color, filtered.	Residue on Evaporation.						Nitrogen.				
					Total at 100° Co.		Non-Volatile, Mineral.		Volatile, Organic.		Of Free Ammonia, filtered.	Total, Organic.		Of Nitrites.	Of Nitrates.
					Filtered.	Unfiltered.	Filtered.	Unfiltered.	Filtered.	Unfiltered.		Filtered.	Unfiltered.		
1301	May	Distinct.	Small.	.4	55.5	61.5	43.9	39.5	12.5	22.0	0.068	0.482	0.582	0.006	0.10
1321	June 9	Marked.	Moderate.	.5	79.5	100.5	58.5	69.5	21.0	31.0	.038	.812	.862	.014	.15
1345	July 9	Distinct.	Moderate.	.4	72.0	74.0	53.5	53.0	18.5	21.0	.056	.494	.544	.004	.10
1369	Aug. 11	Distinct.	Moderate.	.6	79.0	79.0	54.5	49.0	24.5	30.0	.062	.538	.688	.018	.30
1393	Sept. 8	Distinct.	Moderate.	.6	75.0	82.0	48.5	51.5	26.5	30.5	.126	.724	.874	.006	.15
1415	Oct. 6	Distinct.	Scanty.	.6	66.5	72.5	48.0	47.5	18.5	25.0	.030	.770	1.02	.004	.17
			Average,	.5	71.3	78.3	51.0	51.7	20.3	26.6	.063	.637	.762	.009	.16

REMARKS.—The odor was recorded as distinctly musty in all the samples.

No 3.—BURNSIDE. CHEMICAL EXAMINATION, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Color.	Residue on Evaporation.						Chlorine.	Nitrogen.				
					Total at 100° C.		Non-Volatile, Mineral.		Volatile, Organic.			Of Free Ammonia, unfiltered.	Total Organic.		Of Nitrates.	
					Filtered.	Unfil- tered.	Filtered.	Unfil- tered.	Filtered.	Unfil- tered.			Filtered.	Unfil- tered.		
1308	May 20	Distinct.	Scanty.	.4	80.0	84.0	61.0	61.5	19.0	22.5	5.60	0.238	0.282.	0.612	0.020	0.15
1322	June 9	Slight.	Very scanty.	.5	81.0	82.5	60.0	60.5	21.0	22.0	6.90	.390	.620	.710	.034	.08
1346	July 10	Clear.	Very scanty.	.3	71.5	77.0	57.0	60.5	14.5	16.5	4.80	.096	.384	.564	.040	.15
1372	Aug. 12	Slight.	Very scanty.	.3	84.0	85.0	66.5	62.5	17.5	22.5	6.50	.236	.614	3.014	.014	.15
1394	Sept. 8	Slight.	Small.	.5	74.5	75.0	54.5	52.5	20.0	22.5	4.90	.186	.664	.964	.010	.15
1416	Oct. 6	Clear.	None.	.5	84.5	85.0	64.0	64.0	20.5	21.0	4.95	.018	.970	1.070	.020	.15
					79.3	81.4	60.5	60.3	18.8	21.1	5.61	.194	.589	1.156	.023	.14

REMARKS.—The odor was recorded as slight musty in 1308, distinctly musty in 1322 and 1394, mouldy in 1416 and none in the others.

## AVERAGES OF ANALYSES, 1895 AND 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

Year.	Residue on Evaporation.										Nitrogen.			
	Total at 100° C.			Non-Volatile, Mineral.		Volatile, Organic.					Free Ammonia, unfiltered.	Chlorine.		
	Filtered.	Unfil- tered.	Unfil- tered.	Filtered.	Unfil- tered.	Filtered.	Unfil- tered.	Filtered.	Unfil- tered.	Filtered.	Total, Organic.	Filtered.	Unfil- tered.	Of Nitrates.
No. 1.—WINDEMER.														
1895	71.9	138.9	44.9	95.5	27.0	43.4	4.85	.071	.810	1.470	.017	.16		
1896	74.2	98.6	42.6	57.8	31.6	40.8	4.49	.070	.521	.913	.008	.18		
Average,	73.1	118.8	43.8	76.7	29.3	42.1	4.72	.071	.666	1.192	.013	.17		
No. 2.—NORTH MANCHESTER.														
1895	69.7	82.1	47.6	55.1	22.1	27.0	3.87	.124	.796	1.096	.008	.11		
1896	71.3	78.3	51.0	51.7	20.3	26.6	4.45	.063	.637	.762	.009	.16		
Average,	70.5	80.2	49.3	53.4	21.2	26.8	4.16	.094	.717	.929	.009	.14		
No. 3.—BURNSIDE.														
1895	87.3	98.6	71.0	79.1	16.3	19.5	6.03	.172	.607	.802	.025	.10		
1896	79.3	81.4	60.5	60.3	18.8	21.1	5.61	.194	.589	1.156	.023	.14		
Average,	83.3	90.0	65.8	69.7	17.6	20.3	5.82	.183	.598	.976	.024	.12		



## BRISTOL SEWAGE.

The samples were taken from the main sewer at the filter beds. They were not composite samples, but were taken at various times during the day, four of them being on one day. They were all furnished by Mr. A. Munson.

The results of the analyses showed the sewage to be so dilute that it was obvious that the ground water bore a relatively large proportion to the house sewage, consequently the analyses were discontinued in October.

BRISTOL SEWAGE. CHEMICAL EXAMINATION, 1896.  
FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Turbidity.	Sediment.	Residue on Evaporation.						Nitrogen of			
				Total at 100° C.		Non-Volatile, Mineral.		Volatile, Organic.		Free Ammonia, not filtered.	Total, Organic.		Nitrates.
				Unfiltered.	Filtered.	Unfiltered.	Filtered.	Unfiltered.	Filtered.		Filtered.	Unfiltered.	
1281	April 7 7 A. M.	Slight.	Scanty.	94.0	103.5	70.0	70.0	24.0	33.5	0.380	1.870	2.020	0.016
1291	April 29 11 A. M.	Distinct.	Small.	84.0	86.0	70.0	70.0	14.0	16.0	.098	.922	1.520	.060
1292	April 29 1 P. M.	Marked.	Moderate.	98.0	115.0	74.5	81.0	23.5	34.0	.774	2.926	3.476	.120
1293	April 29 5 P. M.	Marked.	Moderate.	100.0	120.0	75.0	86.5	25.0	33.5	.348	3.352	3.812	.160
1294	April 29 5 P. M.	Marked.	Marked.	99.5	234.0	78.5	141.5	21.0	92.5	.644	3.856	7.606	.600
1356	July 21 10 A. M.	Marked.	Much.	104.0	197.0	76.0	142.0	28.0	55.0	.812	5.438	6.188	.400
1371	Aug. 12 9 A. M.	Marked.	Much.	126.0	165.0	91.0	108.0	35.0	57.0	.940	4.060	5.810	.000
1397	Sept. 8 6 P. M.	Marked.	Much.	220.0	242.0	160.0	173.0	60.0	69.0	1.570	3.430	5.780	.700
1419	Oct. 6 8 A. M.	Distinct.	Scanty.	192.0	257.0	141.0	177.0	51.0	80.0	1.950	2.550	5.150	.120
			Average,	124.2	168.8	92.9	116.5	31.3	52.3	.902	3.156	4.596	.242

REMARKS.—The odor was in all the samples distinctly musty but not putrefactive in character.

## BRISTOL UNDERDRAIN.

The sewers of Bristol are very thoroughly underdrained by a system of underlying drains discharging at several points into the river. Samples for analysis were collected by Mr. A. Munson on the dates given below from the underdrain which empties on Pearl street about 400 feet from Main street. It drains a considerable part of the principal portion of the borough.

## BRISTOL UNDERDRAIN. CHEMICAL EXAMINATION OF DISCHARGE, 1896.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.		Residue on Evaporation.			Nitrogen of					Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1254	Feb. 27	Distinct.	Scanty.	80.0	66.0	14.0	7.60	0.408	0.042	0.006	1.45	35.	.25
1280	April 7	Slight.	Very scanty.	65.5	53.0	12.5	6.76	.364	.042	.006	1.00	40.	.75
1332	June 18	Distinct.	Small.	77.0	61.0	16.0	7.50	.414	.048	.010	1.00	30.	.65
1355	July 21	Distinct.	Scanty.	78.5	61.5	17.0	8.60	.616	.062	.008	1.40	33.	.55
1370	Aug. 12	Distinct.	Much.	102.0	80.5	21.5	8.80	.812	.056	.008	1.05	33.	.65
1396	Sept. 8	Distinct.	Much.	98.5	75.0	23.5	9.10	.816	.084	.008	.70	33.	1.05
1418	Oct. 8	Distinct.	Much.	91.5	77.5	14.0	8.80	.476	.086	.010	.83	40.	1.2
			Average,	84.7	67.7	17.0	8.16	.556	.060	.008	1.06	35.	.74

REMARKS.—The odor of these samples was recorded as distinctly musty.

## DRIVEN WELL NEAR BRISTOL FILTER BEDS.

With the view of testing the effect on the ground water of the application of the sewage to the filter beds, a well 21 feet deep was driven at a distance of 200 feet south of the filter beds. The sewage was run on the irrigation fields north of the beds until early in the spring, when it was turned on the beds.

A comparison of the earlier and later analyses shows very clearly that the effluent flows in the direction of the well. The influence is especially seen in the solids, chlorine, nitrates and hardness. The figures for the ammonias, however, show that the oxidation was good.



## DRIVEN WELL NEAR BRISTOL SEWER BEDS. CHEMICAL EXAMINATION.

FIGURES INDICATE MILLIGRAMS PER LITER OR PARTS PER MILLION.

No.	Date.	Physical Characters.		Residue on Evaporation.			Chlorine.	Nitrogen of				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Turbidity.	Sediment.	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1229	1895 Dec. 21	Clear.	Moderate.	28.5	23.5	5.0	1.45	0.002	0.026	0.000	0.10	3.	.40
1253	1896 Feb. 27	Slight.	Very scanty.	29.5	20.5	9.0	1.65	.000	.012	.004	.35	3.	.25
1279	April 7	None.	None.	27.5	18.0	9.5	2.40	.000	.010	.000	.20	10.	.60
1331	June 18	Slight.	Very scanty.	53.5	43.0	10.5	7.10	.000	.016	.000	1.00	14.	.30
1354	July 21	Very scanty.	Scanty.	61.0	48.0	13.0	9.34	.012	.034	.006	1.00	24.	.50
1376	Aug. 15	Distinct.	Small.	54.0	41.0	13.0	6.34	.002	.026	.002	.60	18.	.45
1395	Sept. 8	Distinct.	Scanty.	62.5	45.0	17.5	7.50	.002	.030	.002	.40	18.	.65
1417	Oct. 6	Slight.	Small.	93.0	81.5	11.5	9.55	.002	.040	.000	1.40	39.	.85
			Average,	51.2	40.1	11.1	5.67	.002	.024	.002	.63	16.	.50

REMARKS.—There was no odor noticed in any of the samples.

## MERIDEN SEWAGE.

The samples for analysis were composite samples taken from the main sewer at the filter beds as follows. A sample pailful was collected each hour from 3 to 10 P. M. on one day and from 6 A. M. to 2 P. M. of the next, making a total of seventeen samples. These were all thoroughly mixed together in a cask and the final sample for analysis taken from this mixture.

The samples were all collected by Mr. Wm. Cross, who has charge of the filter beds.



The following are brief summaries of reports of some of the analyses of wells and water supplies suspected of being the cause of infectious diseases.

January 7, 1896.

*C. A. Lindsley, M.D.*

DEAR DOCTOR :—There is a large privy used by several families situated about thirty feet from the well. There have been cases of typhoid and diphtheria among those using the water. There are many wells similarly situated in the village—and there have been recently two fatal cases of diphtheria, and there are at present other mild cases of the same disease in the village and also of scarlet fever. Are these two diseases ever communicated by drinking water?

Can you use the water I sent, or will you send special bottles?

Yours truly,

E. A. LINNELL, *Health Officer of Norwich.*

*To E. H. Linnell, M.D.:*

The water received from you on Jan. 15, 1896, has been examined. The results show a very great past sewage contamination in the results for chlorine and nitrates. The organic matter is not excessive.

In my opinion the water is a suspicious one and should not be used for domestic purposes.

Yours truly,

HERBERT E. SMITH,

*Chemist State Board of Health.*

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January 20, 1896.

*Charles A. Lindsley, M.D., Secretary State Board of Health.*

DEAR DOCTOR :—There have been four cases of typhoid fever in the tenement connected with the Hop River station on the New England railroad. I am unable to determine the source of the infection but suspect the well water may not be pure. Would you be so kind as to tell me how to get a sample, how to send it, and whom to in order to have it examined for germs.

Yours respectfully,

W. L. HIGGINS,

*Health Officer South Coventry, Conn.*

NEW HAVEN, CONN.,                    }  
January 31st, 1896.                }

*W. L. Higgins, M.D., South Coventry, Conn.*

MY DEAR SIR—Enclosed I send a statement of the results of the examination of the sample of water sent to the Board of Health.

The noticeable feature in the results is the considerable amount of free ammonia. This in a well in which the water stands within two feet and four inches of the surface, and which is only five feet deep, is indicative of sewage contamination. The water contains very little in the way of nitrates, which indicates that the water has not been purified by the natural processes of oxidation during filtration.

Bacteriological examinations were not made, as the sample was not suitable for such examinations, and they were considered unnecessary in the light of the chemical examination.

I am of the opinion that the water should not be used for drinking, and think that you would be abundantly justified by the results in closing the well.

Very truly yours,

HERBERT E. SMITH.

*Chemist State Board of Health.*

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LEBANON, CONN., June 4th, 1896.

DEAR DOCTOR :—I wrote you last fall in reference to an alleged nuisance existing in the town of Franklin, Conn., on the premises of Michael Shea, adjoining the premises of Wm. Robinson : namely, a barn used as a stable within 10 feet, more or less, of said Robinson's well. Mr. Clifton Peck wrote you about it in May or June of 1893. Others have written since. Well, last fall I followed your instruction and sent a notice of abatement to said Shea, but nothing has been done. Now I send you a quantity of the water from said well for you to analyze and thus see if Robinson has good grounds for his complaint. If after examining the water you wish to know more about the matter, please come and look over the case. Please write me at all events.

Very truly yours,

E. L. DANIELSON, M.D.,

*Health Officer for Towns of Franklin and Lebanon.*



NEW HAVEN, CONN.,  
June 12th, 1896. }

*Dr. E. S. Danielson, Lebanon, Conn.*

MY DEAR DOCTOR—Enclosed I send a statement of the analysis of the sample of water sent to Dr. Lindsley.

The water does not show such gross contamination as we frequently find in well waters, but the amount of organic matter is too large for a ground water, and the chlorine and nitrates with the free ammonia indicate that the contamination is of the nature of sewage ; it therefore is a sewage-contaminated water, and it is not in my opinion a suitable one to be used for drinking.

In the absence of definite information concerning the surroundings, I can give you no idea of the source of this contamination.

Very truly yours,

HERBERT E. SMITH.  
*Chemist State Board of Health.*

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HIGGANUM, CONN., April 24, 1896.

*Prof. C. A. Lindsley, M.D., Sec'y State Board of Health, New Haven, Conn.*

DEAR DOCTOR:—I will say that there has been in one house quite a good deal of sickness last year, and now one mild case of typhoid fever. That is the reason I want the water examined. Please send bottle and I will follow instructions and send back bottle by express.

Fraternally yours,

LEROY A. SMITH.

NEW HAVEN, CONN.,  
May 8th, 1896. }

*LeRoy A. Smith, M.D., Higganum, Conn.*

MY DEAR SIR—The sample of water you sent me was duly received. Enclosed I send a statement of the results.

The chlorine and nitrates indicate some general contamination of the ground water, very likely from privies or sink waste. The purification, however, has been very satisfactory, as indicated by the low figures for organic matter. As far as the organic matter is concerned there is no objection which can be urged against the water, but with the evidences of general contamination, and the

shallowness of the well, I should be disposed to regard the water with suspicion, and to prohibit its use in case there were any water-born diseases in the neighborhood.

Trusting that the examination is satisfactory, I am

Very truly yours,

HERBERT E. SMITH.

*Chemist State Board of Health.*

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VERNON, July 22d, 1896.

*Dr. Lindsley,*

DEAR SIR—Some two years ago my attention was called to the condition of two wells on a farm. On examination I found one in the cellar with a broken sink drain in close proximity, which I condemned. The other was situated between a hog pen and a barn yard on the other side. I abolished the hog pen, but the barn yard remains. The water has been used by the family for culinary purposes ever since. Another complaint has been made that the water is not right. I would like to have the water analyzed, to test the quality of the water and see if it is fit for family purposes.

Yours truly,

A. R. GOODRICH.

*A. R. Goodrich, M.D., Health Officer, Vernon.*

DEAR SIR—Inclosed I send statements of the results of the analyses of the samples of water which you sent for examination. As you see, they are very satisfactory and quite different from what would have been expected from the surroundings. Since the water contains no evidence of recent contamination nor the products of oxidation of past contamination, it seems quite certain that the water in the wells at the time the samples were taken must have come from some other source than the immediate surroundings. It is quite possible that at some seasons, as in times of high water, there may be contamination from surface water, but as to that the examination of these samples gives of course no information.

The water is soft and contains only a small amount of mineral matter in solution. It is of good organic purity and shows no evidences of sewage or drainage contamination. In my opinion the water is a satisfactory one for domestic uses.

Yours truly,

HERBERT E. SMITH,

*Chemist State Board of Health.*

MERIDEN, CONN., Nov. 16th, 1896.

Prof. Herbert E. Smith,

DEAR SIR—I send this A. M. *via* Adams Express, two samples of water, as per directions. I failed to mention in regard to the odor. Some called it paint, others called it putty, others called it turpentine, quite a number called it rotten both in smell and taste. The complaints commenced about a month ago and have been growing less for the last week.

Yours truly,

G. W. MILLER, *Supt.*

NEW HAVEN, CONN.,  
November 25th, 1896. }

*George W. Miller, Supt. Meriden Water Works.*

MY DEAR SIR—The samples of water which you sent me were duly received. Enclosed I send a statement of the results of my examination.

No. 1 is the Merimere sample, and No. 2 the one taken from the tap.

No. 1 showed a large number of *Uroglena* averaging about 50 per cc. There were no other micro-organisms of importance.

No. 2 did not show any *Uroglena* or other organism of importance. There was a slight oily odor to No. 2 ; this was not apparent in No. 1.

The discovery of the *Uroglena* in the sample from the reservoir is a sufficient and satisfactory explanation of the odor which has been complained of. This organism is a delicate one which imparts little or no odor to the water in which it lives, but it readily breaks down when exposed to pressure and the abnormal conditions existing in the water pipes, and in so doing discharges into the water a small quantity of oily material which has a strong and very disagreeable odor. The amount of material is really very small and as far as is known does not have any deleterious effect upon persons using the water except in so far as the nausea or other ill effects coming from the taste and odor are deleterious. The reason that we find the organisms in the water from the reservoir and do not find them in the pipe water you will understand from what I have said.

I cannot account for the difference in the two samples which is noticeable in the total solids and hardness ; possibly the difference is caused by the water absorbing some mineral matter in passing through the mains ; as to that of course I do not know.

The samples both show a moderately large amount of organic matter which is of vegetable origin. They are both free from evidences of sewage contamination, and I do not see why they should not be satisfactory except for the presence of the *Uroglena*. When a reservoir becomes affected with these growths there is nothing to do but to wait until they disappear spontaneously, as they usually do after from three to five weeks.

The water can be somewhat improved, though not wholly deprived of odor, by free boiling. It is also very much improved by filtration through the Pasteur filter.

If there are any other points concerning the analysis which you wish further information on, I shall be pleased to hear from you.

Believe me, very truly yours,

HERBERT E. SMITH,  
*Chemist State Board of Health.*

## DESCRIPTION OF CONNECTICUT PUBLIC WATER SUPPLY.

The information on which the following descriptions are based was obtained for the most part from the answers to the following questions sent in form of blanks to the water officials of the State as far as they were known.

### GENERAL DESCRIPTION.

1. Name of Works or Company. 2. History of works. By whom owned originally and at present. When begun. Character and dates of important additions. 3. Approximate cost of original works and of additions. 4. Name of city or town chiefly supplied. 5. Estimated population of, in 1896. 6. What other communities, if any, are supplied? 7. Estimated number of people using water. 8. Average daily consumption in gallons. 9. Estimated consumption per capita. 10. Total estimated length of distribution mains. 11. What processes of purification, if any, are used? 12. Is any method of purification proposed for the near future? If so, what? 13. Has there been any deficiency in the supply at any time during the past three years? If so, when? 14. Is it proposed to increase the supply in the near future. 15. Have printed reports of the works been issued? 16. Name of the person giving this information?

### DESCRIPTION OF EACH SUPPLY.

1. Name of reservoir. 2. Storage or distributing only. 3. Distance and direction from town or city. 4. Source of water, natural or artificial reservoir, river, spring, well, etc. 5. Is it a gravity supply, or obtained by pumping? 6. Area of watershed. 7. Character of watershed (hilly or not. Relative proportion of woodland, pasture, cultivated fields). 8. Area of reservoir. 9. Approximate average depth. 10. Proportion of shallow flowage (4 ft. or less) to entire area. 11. Present character of bottom (sandy, rocky, muddy). 12. Was the surface loam originally removed? 13. Are vegetable growths abundant? 14. Have there been bad odors? If so, state time of year, and character



(fish, mouldy, vegetable, etc.). 15. Does the water supply receive sewage, drainage from factories or other pollution? Mention kind of factory and the distance from intake where the contamination takes place.

The replies to some of the questions were so incomplete that those questions have been left out of consideration in the descriptions. Blanks were sent to some official connected with each of the works described, but in some cases the returns were so meagre that information was drawn from other sources, especially from the "Manual of American Water Supplies." Areas of watersheds were largely calculated from the State topographical map. The population of watersheds was obtained by counting the houses shown on the topographical map, and assigning to each the average number of inhabitants as given for the region under consideration in the United States census for 1890. This is a method commonly employed, but it should be noted that it is like to result in an over-statement, as some of the houses may be vacant.

Below is given a table showing the population of towns having water supplies and those not supplied.

In a town having a water supply not all of the inhabitants are supplied and in some cases the supply is limited to a single community or village in the town, consequently the proportion of the population enjoying a public water supply is less than appears from the figures.

Population (1890)	Number of Towns of Given Population having a Public Water Supply.	Total Population of Towns in Preceding column.	Number of Towns of Given Population <i>not</i> having a Public Water Supply.	Total Population of Towns in Preceding column.
Under 500 ---	0	0	5	2,206
500-1,000 --	2	1,809	36	26,300
1,000-1,500 --	1	1,383	28	34,391
1,500-2,000 --	5	9,026	13	23,174
2,000-2,500 --	2	4,420	10	22,312
2,500-3,000 --	4	11,303	8	21,419
3,000-3,500 --	5	16,322	5	16,459
3,500-4,000 --	2	7,923	5	18,815
4,000-4,500 --	2	8,990	1	4,460
Above 4,500 -	31	505,383	2	10,162
Totals -----	54	566,559	113	179,699

Of the fifty-four water supplies described, fourteen are public properties and forty are private companies. The public water

supplies furnish towns having a population of 242,470, and the private companies supply a population of 323,089.

The total cost value of the water works of the State as estimated from the returns received is about \$15,750,000; the public properties aggregating about \$7,750,000, and the private companies about \$8,000,000.

The following table gives statistics concerning the consumption of water in the cities and towns of the State as far as the data could be obtained. The consumption is given *per consumer* rather than as *per inhabitant*, as this gives a better ratio of comparison, because so many of the inhabitants of some places are not supplied with water. It will be seen that there is a great difference in the rate of consumption in the different places. The larger amounts used in manufacturing towns may be explained by the large use of water in the shops for power and manufacturing purposes.

*Statistics relating to the Consumption of Water in various Cities and Towns.*

City or Town.	Estimated Population.	Estimated Population Supplied.	Average Daily Con- sumption. Gallons.	Daily Consump- tion per Consumer. Gallons.
	1896.	1896.	1896.	
Ansonia .....	13,000	6,000	1,000,000	166
Birmingham .....	7,000	6,000	500,000	83
Bridgeport .....	65,000	60,000	16,000,000	266
Farmington .....	1,300	500	150,000	300
Hartford .....	65,000	65,000	7,500,000	115
Litchfield .....	3,500	1,000	150,000	150
Meriden .....	28,000	25,000	2,000,000	80
Middletown .....	18,000	12,000	1,000,000	85
New Britain .....	25,000	18,000	1,500,000	50
New Haven .....	100,000	96,000	13,700,000	142
North Canaan .....	1,000	800	100,000	125
Norwalk .....	7,000	4,500	800,000	175
Putnam .....	6,880	6,800	850,000	51
Sharon .....	600	450	20,000	45
Southington .....	6,500	4,200	1,000,000	238
Stamford .....	18,000	12,000	1,500,000	125
Stonington, Groton and Mystic .....	-----	12,800	294,000	23
Thompsonville, Warehouse Point and Suffield .....	-----	12,000	500,000	42
Wallingford .....	6,800	6,500	1,000,000	153
Waterbury .....	40,000	30,000	4,000,000	133
Windsor .....	3,300	600	24,000	40
Windsor Locks .....	3,000	2,000	100,000	50

The following is a list of the works described :

Ansonia.	New Canaan.	Southington.
Bethel.	New Haven.	Stafford Springs.
Birmingham and Derby.	Newington.	Stamford.
Bridgeport.	New London.	Stonington, Groton and
Bristol.	New Milford.	Mystic.
Danbury.	Norfolk.	Terryville.
Danielson.	North Canaan.	Thomaston.
Durham.	Norwalk.	Thompsonville and
East Hartford.	North Manchester.	Warehouse Point.
Farmington.	Norwich.	Torrington.
Granby.	Plainville.	Unionville.
Greenwich.	Portland.	Wallingford.
Hartford.	Putnam.	Waterbury.
Kent.	Rockville.	West Haven.
Litchfield.	Sharon.	Willimantic.
Meriden.	Shelton.	Windsor.
Middletown.	Simsbury.	Windsor Locks.
Naugatuck.	South Manchester.	Winsted.
New Britain.	South Norwalk.	

#### WATER SUPPLY OF ANSONIA.

Population in 1896, 13,000. The city is supplied by two water companies; the Ansonia Water Company and the Fountain Water Company. The inhabitants of the east side of the Naugatuck River are supplied by the Ansonia Water Company; those on the west side by the Fountain Water Company.

*The Ansonia Water Company.*—The works were begun in 1867 by building an impounding reservoir on Beaver Brook about 2.5 miles northeast of the town. Additional impounding reservoirs have been built on Beaver Brook in 1884, 1885 and 1895. The company supplies a population of about 6,000. The daily average consumption is 1,000,000 gallons and the daily consumption per capita is about 166 gallons.

Reservoir No. 1, a storage and distributing reservoir, is located 1.5 miles northeast of the town, and has a capacity of 38,000,000 gallons. The watershed, 817 acres in area, is composed of hilly and rocky woodland with some pasture.

Reservoir No. 2 has a capacity of 2,820,000 gallons. The watershed, 200 acres in area, is composed mostly of hilly pasturage.

Reservoir No. 3 has a capacity of 20,296,000 gallons. The watershed is mostly pasture land.

Reservoir No. 4 has an area of 58 acres and a capacity of

156,000,000 gallons; average depth 12 feet; bottom rocky and gravelly, except 8 acres of peat in a hollow which is covered with 7 feet of water that cannot be drawn off. The surface loam was almost all removed. The watershed, 620 acres in area, is composed of hilly pasture land.

The company controls a large portion of the lands adjacent to its reservoirs. There is no contamination. The system supplies by gravity. The total length of mains is about 12 miles.

*The Fountain Water Company.*—The works were begun in 1872. The source of supply is an artificial reservoir, fed by springs, and located about 2 miles west of the town. The capacity of the reservoir is 33,000,000 gallons; average depth 15 feet; bottom of clay. The surface loam was removed.

The watershed, 150 acres in area, is composed of hilly woodlands and pastures with about 10 acres under cultivation. There is no contamination and only one house is situated on the watershed. The reservoir distributes by gravity. The total length of mains is about 14 miles.

#### WATER SUPPLY OF BETHEL.

Population 1895, 3,500. The works are owned by the borough and were built in 1878. The average daily consumption is about 150,000 gallons.

The source of supply is surface water by gravity from impounding reservoir on a small stream. The reservoir is located 1.5 miles from and 175 feet above the borough. The reservoir is 37 acres in area; capacity 96,000,000 gallons. The surface loam was not removed, and the bottom is of loam and studded with the stumps of trees. There is considerable shallow flowage and vegetable growths are very abundant, especially during the summer months, and the water is very offensive in odor and taste.

A filter bed was built in 1891 to improve the water. A second dam was built 150 feet below the reservoir dam. The filter is located in the space between the two dams and is about 13,000 square feet in area. The water from the gate chamber of the reservoir dam passes by a pipe to the second dam and flows over the surface of the filter bed. Hence the water passes by downward filtration through the bed to a tile drain and flows to a well at the corner, from which it passes through another pipe to the service main. The filter is from 16 inches to 3 feet in thickness. The surface sand is not prepared, but is selected from a neighbor-



ing sand-bank. The water stands continually on the filter bed and is from 18 to 20 feet in depth. The filter is cleaned and the surface sand removed about every six months.

The total length of mains is about 8 miles.

#### WATER SUPPLY OF BIRMINGHAM AND DERBY.

Population in 1896, 7,000. The works are owned by the Birmingham Water Company and were begun in 1860. An additional reservoir was built in 1871. Derby is also supplied. The estimated population using the water is 6,000. The average daily consumption is 500,000 gallons, equal to a daily consumption of 83 gallons per capita. The source of supply is surface water from a small stream impounded by two reservoirs.

Reservoir No. 1, a distributing reservoir, is located about one mile northwest of Derby. It has an area of 9 acres; average depth 6 feet, with about one-half shallow flowage; bottom muddy.

Reservoir No. 2, a storage reservoir, is located one-fourth of a mile above the distributing reservoir on the same stream. It has an area of 35 acres; average depth 9 feet, with about 11 acres of shallow flowage; bottom sandy and muddy; about one-third of the surface loam was removed.

There are vegetable growths in the water, and in July, 1896, a fishy odor and taste was noticeable. The total watershed, 0.6 of a square mile in area, is composed mostly of cultivated fields and pastures. The population, estimated from the new topographical map of the State and the U. S. Census Report for 1890, is 82, equal to a population of 137 per square mile.

Chemical and microscopical examinations were made of samples during the year 1895, and the results of the analyses were published in the Eighteenth Annual Report, pages 205-6.

The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
Averages 1895 ..	.3	36.5	22.6	14.0	3.21	.033	.294	.0013	.05	7.	3.53



## WATER SUPPLY OF BRIDGEPORT.

Population in 1896, 65,000. The population supplied with water is about 60,000, the average daily consumption 16,000,000 gallons, and the average daily consumption per capita, 266 gallons. The works are owned by the Bridgeport Hydraulic Company. The present company obtained its charter in 1857, and in 1887 purchased all the rights and property of the Citizens' Water Company, and added them to its plant. There are several sources of supply : the Poquonnock River, Island Brook system and Mill River.

*The Poquonnock River.*—Poquonnock River, which is 15 miles long, drains, at the point from which the water is taken, a watershed of 24.1 square miles. The region is hilly and has numerous cultivated fields, pastures and woodlands. The water is pumped from Factory Pond to a distributing reservoir located in North Bridgeport, which has a capacity of 4,000,000 gallons.

Factory Pond is located about 2 miles north of the city. It has an area of 65 acres. The shores are cultivated and wooded. There are a few dwelling houses on the banks. The water is pumped near the dam from a depth of 15 feet.

Trumbull Reservoir, located about 3 miles above the pumping station at Factory Pond, is used as a storage reservoir. It is 45 acres in area and there is a shallow flowage of about 10 acres. The capacity is 175,000,000 gallons. The bottom is muddy and sandy ; only a small portion of the surface loam was removed.

Nichols Reservoir, a second storage reservoir, is located on an easterly branch of the river. Its capacity is 128,000,000 gallons, and its watershed is 4 square miles.

The population on the Poquonnock watershed, estimated from the new topographical map of Connecticut and the United States Census for 1890, is about 1,600, equal to a population of 66 per square mile. The river is dammed at several places for power. The most serious contamination is at Long Hill, where there are houses, a grist mill and a carriage factory along the river. At Stepney, 2 miles farther up the river, there are a number of houses along the shore. This water is mostly used as a dry weather supply.

*Island Brook System.*—This system drains a watershed of 4 square miles. The region is hilly and contains numerous farms. The system consists of 3 artificial reservoirs, located about 3 miles due north of the city.

Horse Tavern Reservoir, an artificial pond 7 acres in area, overflows into Ox Brook Reservoir. The latter has an area of 15 acres, one-fifth of which is shallow flowage. Its capacity is 20,000,000 gallons; bottom rocky and muddy. The surface soil was removed from about three-fourths of the flooded area. The watershed is only about .5 of a square mile in area, but the reservoir receives the overflow from Horse Tavern Reservoir.

Island Brook Reservoir, the lowest of the system, is 62 acres in area, one-fourth of which is shallow flowage. Its capacity is 200,000,000 gallons; bottom rocky and sandy. The surface soil was not removed. It has the largest storage capacity of the system and distributes by gravity.

The estimated population on the watershed is 363, equal to a population of 91 per square mile.

*The Mill River Supply.*—This system drains a watershed of 12.7 square miles. The region is hilly with many swampy areas along the river. There are two storage reservoirs.

Reservoir No. 1, used both as a storage and distributing reservoir, is located about 7 miles northwest of the city. It has an area of 45 acres, of which one-fifth is shallow flowage. The capacity is 250,000,000 gallons.

Reservoir No. 2, a storage reservoir, was built about 3 years ago. It has an area of 120 acres, of which one-fifth is shallow flowage. Its capacity is 900,000,000 gallons: bottom sandy and about one-fourth muddy. Nearly one-half of the surface loam was removed. The vegetable odor and taste, noticeable at different times, is thought to be due to organic matter in the new reservoir.

The estimated population on the watershed is 737, equal to a population of 58 per square mile. This system supplies the city by gravity.

The subject of filtration is being investigated by the company, but nothing definite has been decided upon. The total length of mains is about 100 miles.

Chemical, microscopical and bacteriological examinations were made of the Mill River supply in 1890-91, and published in the Fourteenth Annual Report, pages 300-3. Chemical and microscopical examinations of the Mill River, Island Brook and Poquonnock River supplies were made during 1896, and the results are to be found elsewhere in this report.

The averages of the chemical examinations are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
Mill River, 1890-91	.4	39.9	30.1	9.8	2.30	0.023	0.153	.001	.09	13.	4.59
" " 1896...	.5	45.1	29.1	16.0	2.93	.030	.147	.002	.11	9.	4.64
Island Brook, 1896	.4	43.4	26.5	16.9	3.72	.025	.181	.001	.07	7.	4.55
Poquonnock, 1896.	.5	46.9	28.7	18.2	3.23	.030	.157	.002	.08	9.	5.73

### WATER SUPPLY OF BRISTOL.

Population in 1890, 7,883. The works are owned by the Bristol Water Company. The borough neither controls rates nor has right to purchase works. Water was first obtained in 1884, from Green Meadow Reservoir. In 1886 water was diverted from Poland River to Green Meadow Reservoir, and in 1889 a storage reservoir was built on Poland River.

Green Meadow Reservoir, a storage and distributing reservoir, is located about three miles west of the borough and distributes by gravity. Its area is 28.12 acres ; capacity 55,000,000 gallons ; average depth 8 feet, with about one-third shallow flowage ; bottom sand and rocky. The surface loam was removed. The reservoir is supplied by springs and the surface water from its small watershed, also from the Poland River supply, for which it is the distributing reservoir. The drainage area of .5 square miles is hilly, one-half woodland and the rest pastures and cultivated fields. There are about eight houses upon the watershed.

Poland River at the point of diversion is about 5 miles long and has an area of 6.55 square miles. The region is hilly and contains many cultivated fields and pastures. The population on the watershed is 154, equal to a population of 19. per square mile. The storage reservoir on Poland River is located about 2 miles above the intake. It has an area of 19 acres ; capacity, 98,000,000 gallons ; average depth 15 feet ; small area of shallow flowage ; surface soil was not removed.

The dam is of earth with heart-wall, 650 feet long and 31 feet high.

The water, as delivered to consumers, occasionally has a disagreeable fishy odor in summer, but the same odor was very pronounced in the winter of 1896, when it was found to be due to *Uroglena Volvox*. The total length of mains is 18.75 square miles.

Chemical and microscopical examinations were made during 1895 and published in the Eighteenth Annual Report, pages 203-4. Below are given the averages of the chemical examinations of monthly samples.

	Color.	RESIDUE ON EVAPORATION.			Chlorine	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
Averages, 1895-----	.3	30.1	17.5	12.6	1.53	.027	.158	.0006	.10	5.	4.50

#### WATER SUPPLY OF DANBURY.

Population in 1890, 19,473. In 1833, water from springs for domestic use was first introduced by the Danbury Water Company. The present works are owned by the city, and were begun in 1860. Consumption of water unknown.

The sources of supply are from impounding reservoirs located from 3 to 5 miles northwest of the city.

Lower Kohanza Reservoir, constructed in 1860, was formed by an earth dam 300 feet long and 25 feet high, built across a small stream. It is 8 acres in area; capacity, 40,000,000 gallons; average depth, 12 feet. No surface loam was removed. It is now used as a distributing reservoir, and is 3 miles from and 200 feet above the city, which it supplies by gravity.

Upper Kohanza Reservoir, constructed on the same stream in 1886, is 33 acres in area; capacity 150,000,000 gallons; average depth 11 feet; bottom muddy. No surface loam was removed. The total watershed, .46 of a square mile in area, is composed of hilly woodland and pasturage. There are four houses on this watershed.

The Padanaram Reservoir, built in 1883, has an area of 20 acres, an average depth of 18 feet, and is 4 miles from the city. It is used as a distributing reservoir independently of the Lower Kohanza, and distributes by gravity.



East Lake, a storage reservoir, is located about .5 miles above Padanaram on the same stream, and is about 4.5 miles from the city. It has an area of 73 acres, an average depth of 17 feet.

The total watershed of this system is 3.25 square miles and is composed of hilly woodlands and cultivated fields. The sites of the reservoirs were formerly meadows and pastures. The population on the watershed from the topographical map of Connecticut and U. S. Census Report is about 220, equal to a population of 68 per square mile.

Bogg's Pond, located about 5 miles west of the city and in a different watershed, is used as a storage and distributing reservoir. The watershed, .49 square miles in area, is very hilly woodland with no population upon it. The total length of mains is about 35 miles.

Chemical, microscopical and bacteriological examinations were made of samples from the Padanaram Reservoir in 1889-90, and published in the Fourteenth Annual Report, pages 303-6. Chemical and microscopical examinations were made of samples from the East Lake and Kohanza supplies, and also from Bogg's Pond every other month during 1896, and are to be found elsewhere in this report. Below are given the averages of the chemical examinations.

	Color.	RESIDUE ON EVAPORATION				NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
Padanaram, 1889-90...	.1	48.5	38.4	10.1	1.91	0.025	0.159	.001	.09	---	---
East Lake, 1896 .....	.4	44.8	28.0	16.8	2.34	.049	.254	.001	.07	11	4.62
Upper Kohanza, 1896..	.3	42.6	25.4	17.2	2.56	.027	.241	.000	.06	8	4.21
Bogg's Pond, 1896....	.3	35.7	20.9	14.8	2.31	.034	.258	.000	.05	8	3.93

#### WATER SUPPLY OF DANIELSON.

Population in 1895, 9,890. The works are owned by the Crystal Water Company, and were begun in 1886. A perpetual franchise was granted the company. Portions of Killingly and Brooklyn are also supplied. Consumption of water unknown.

The source of supply is surface water from Higgins' Brook. Hygeia Reservoir, a storage and distributing reservoir, is located



about 3.5 miles northeast of the borough. It is 211,600 square feet in area; bottom rock and gravel. The surface loam was removed from about one foot above to six feet below the water line. No contamination exists. The reservoir distributes by gravity.

In 1889, a fire reservoir was built, 133 feet in diameter and 10 feet deep, affording a fire pressure of 75 lbs. The total length of mains is about 11 miles.

#### WATER SUPPLY OF DURHAM.

Population in 1890, 856. The works were built for a domestic supply in 1796, and were rebuilt in 1832 by the Durham Aqueduct Company. This company consists of about 40 families in Durham.

The source of supply is from Cold Spring by gravity. The spring is walled and is 4 feet long, 5 feet wide and 4 feet deep.

The total length of mains is 1.8 miles.

Chemical examinations were made of samples taken in February and July, 1894, and were published in the Seventeenth Annual Report, page 295 and the averages of these examinations are given below.

Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammonia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
.0	47.5	45.0	2.5	2.16	.001	.014	.000	.82	23	2.08

#### WATER SUPPLY OF EAST HARTFORD.

Population in 1890, 4,455. No data could be obtained.

#### WATER SUPPLY OF FARMINGTON.

Population in 1896, 1,300. The works are owned by the Farmington Water Company, and were built in 1881 by W. M. Wadsworth and Sons. The estimated average daily consumption is 150,000 gallons. The population supplied is between 500 and 600, and the average daily consumption per capita is about 300 gallons.

The sources of supply are two impounding reservoirs located nearly a mile from the village. The reservoirs are fed by springs. The combined capacity of the reservoirs is 50,000,000 gallons and their area 20 acres. The average depth is 10 feet. The bottom is loam and muck. The watershed has an area of .75 of a square mile and the region is hilly and wooded. The surface soil was not removed from the reservoirs, and in May and June a fishy odor and taste is noticeable in the water.

The total length of mains is 3 miles.

#### WATER SUPPLY OF GRANBY.

Population in 1896, 1,200. The works are owned by the Salmon Brook Water Co. The population supplied is about 200, and the total length of pipe is 1 mile.

#### WATER SUPPLY OF GREENWICH.

Population in 1896, 3,500. The works are owned by the Greenwich Water Company and were begun in 1879. An additional reservoir was built in 1893. Portchester and a portion of Rye are also supplied. The estimated population supplied is 10,000.

The average daily consumption is 1,250,000 gallons, equal to a daily consumption of 125 gallons per capita.

The sources of supply are two storage and distributing reservoirs, Putnam Lake and Rockwood Lake.

Putnam Lake, an artificial reservoir, is located on a small stream about 4 miles north of the town. It is 75 acres in area, with about 4 acres shallow flowage; capacity, 300,000,000 gallons; average depth, 15 feet; bottom, loam and rock. No surface loam was removed. The watershed, 2.75 square miles in area, is hilly, with about two-thirds cultivated and the rest wooded. The population on the watershed is 159, equal to a population of 58 per square mile. There are vegetable growths in the reservoir.

Rockwood Lake, an artificial reservoir, is located about 5 miles north of the town. It is 93 acres in area, with about 7 acres shallow flowage; capacity, 320,000,000 gallons; average depth, 20 feet; bottom loam and rock. No surface loam was removed. The watershed, .75 of a square mile in area, is hilly and mostly under cultivation.

Both reservoirs distribute by gravity. All the water is filtered through Hyatt filters before it enters the distributing mains. There are two sets of filters; one, constructed in 1888, consists of 4 vertical tanks 10 feet in diameter and has a combined capacity of 1,000,000 gallons per 24 hours. The second set consists of two horizontal tanks 20 feet long and 10 feet in diameter, and has a guaranteed capacity of 1,000,000 gallons each per 24 hours.

From 12 to 15 pounds of alum per diem are used as a coagulant. The alum tank for the horizontal filters is 26 inches by 15 inches and has a capacity of 200 pounds of alum.

The total length of mains is about 50 miles.

Chemical and microscopical examinations were made of samples taken monthly during 1896 from Rockwood Lake, both before and after passing through the Hyatt filters, and the results can be found elsewhere in this report.

#### WATER SUPPLY OF HARTFORD.

Population in 1896, 65,000. The works are owned by the city. The first source of supply was from the Connecticut River, and was built in 1854. These works consisted of a pumping plant, and a distributing reservoir of 8,000,000 gallons capacity located on Asylum Hill, 6,876 feet from the pumping station. This supply is used now only in cases of emergency.

The present supply, a gravity system, consists of six artificial reservoirs located 5 or 6 miles west of the city, five in West Hartford, and one in Farmington. These works were begun in 1865, and reached their present form in 1895. Portions of West Hartford and Wethersfield are also supplied. The population supplied is 65,000. The average daily consumption is 7,500,000 gallons, equal to a daily consumption of 115 gallons per capita.

Reservoir No. 1 is 32 acres in area; capacity 150,000,000 gallons; average depth 25 feet. The surface loam was removed.

Reservoir No. 2 is 44 acres in area; capacity 300,000,000 gallons; average depth 30 feet. The surface loam was removed.

Reservoir No. 3 is 25 acres in area; capacity 150,000,000 gallons; average depth 25 feet. The surface loam was removed.

Reservoir No. 4, Farmington Reservoir, is 63 acres in area; capacity 600,000,000 gallons; average depth 15 feet. The surface loam was removed.

Reservoir No. 5 has a capacity of 100,000,000 gallons. The surface loam was removed.

Reservoir No. 6 has a capacity of 800,000,000 gallons. A canal connects this reservoir with No. 5. This canal, 3.25 miles in length, has quite a watershed, running, as it does, the entire distance on the mountain side.

The aggregate capacity of the system is 2,100,000,000 gallons, equal to 280 days supply. The reservoirs are so arranged that, with the exception of No. 6, water may be drawn separately from any one of them. The watershed, 13 square miles in area, is composed principally of rocky pasture and woodland. It was cleared and drives and bridges were built, making a pleasant park. The watershed is quite free from house drainage except the drainage areas of reservoirs Nos. 1 and 4, where there is a population of 63 and 46 per square mile respectively. The total length of mains is about 100 miles.

Chemical, microscopical and bacteriological examinations were made of samples from the Hartford supply, drawn at the Capitol during the years 1889-90 and 1890-91, and the results of the analyses were published in the Fourteenth Annual Report, pages 253-256.

Chemical examinations were made of two samples in February and July, 1894, and the results were published in the Seventeenth Annual Report, page 295.

The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION,				NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1889-90 .....	.1	60.3	50.6	9.7	1.56	.019	.129	.0006	.06	-----	-----
1890-91 .....	.16	34.4	46.5	7.9	1.59	.024	.181	.0009	.08	-----	-----
1894 .....	.3	58.5	47.0	11.5	2.06	.014	.165	.0010	.09	31.	4.78



## WATER SUPPLY OF KENT.

Population in 1890, 1,383. The works are owned by the Kent Water Company, and were built in 1882. Consumption of water unknown. The source of supply is surface water from a small brook and also springs.

An impounding reservoir distributes by gravity. It has an area of 1.5 acres and is from 2 to 18 feet in depth. The ordinary pressure is 65 lbs. The total length of mains is 2.3 miles.

Chemical examinations were made in February and July, 1894, and the results are published in the Seventeenth Annual Report, page 295. The averages of these chemical examinations are given below.

Monthly samples were examined during 1894 for chlorine, and gave an average of 1.6 parts per million.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1894 .....	.08	64.0	59.3	4.8	1.30	.018	.132	.000	.09	45.	1.65

## WATER SUPPLY OF LITCHFIELD.

Population in 1890, 3,304. The works are owned by the Litchfield Water Company, and were begun in 1890.

The estimated population supplied is 1,000. The average daily consumption is about 150,000 gallons, equal to a daily consumption of 150 gallons per capita.

The source of supply is surface water from Griswold Brook. An artificial reservoir is located about 4.75 miles north of the town and distributes by gravity. The reservoir is 5 acres in area with about  $\frac{1}{2}$  shallow flowage; average depth 10 feet; bottom rocky and muddy. The surface loam was removed 1.5 feet deep. The watershed, 300 acres in area, is composed of hilly woodland. There is no pollution upon the watershed and no disagreeable odors are reported.

The supply has been deficient at times, and in 1896 a pumping station was built and 10 driven wells put in.

The total length of mains is about 8.5 miles.



## WATER SUPPLY OF MERIDEN.

Population of city in 1896, 28,000. The works are owned by the city, and were built in 1869. An additional supply was obtained, in 1891, by building an impounding reservoir in Kensington and pumping to a distributing reservoir. The estimated population supplied is 25,000. The average daily consumption is 2,000,000 gallons, and the daily consumption per capita is 80 gallons.

The main source of supply is Merimere Reservoir, a storage and distributing reservoir. It is located about 2 miles northwest and 250 feet above the city. The reservoir was made by building two earthen dams 25 feet high, between two mountain ridges, thus enclosing a ravine. The area of the reservoir is 58.5 acres; capacity 356,000,000 gallons; average depth 19 feet; bottom sandy, rocky and muddy. The surface loam was removed.

The watershed, about 1,250 acres, is composed of very steep and hilly woodland. The reservoir distributes by gravity.

Kensington Reservoir (Kenmere), a storage reservoir, is located about 6 miles north of the city. The area of the reservoir is 30 acres; capacity 130,000,000 gallons; average depth 19 feet; bottom sandy. The surface loam was removed. The watershed, 1,036 acres in area, is hilly, three-fourths is woodland and about one-fourth cultivated. There are three houses upon the watershed.

The water from Kenmere is pumped to Elmere Reservoir, a distributing reservoir. The latter is located about 1.25 miles north of the city. The area is 4.5 acres; capacity 15,000,000 gallons; average depth 9 feet; bottom rocky. The surface loam was removed. It has a watershed of about 30 acres. This reservoir distributes by gravity.

The water supplied to the mains has usually been quite free from bad odors or tastes, but in the fall of 1896 an almost pure culture of *Uroglena Volvox* developed in Merimere reservoir. The total length of mains is 44 miles. The supply was low in the fall of '94 and '95, and a new storage reservoir, Hallmere, is being built above Kenmere reservoir which will store about 130,000,000 gallons.

Chemical, microscopical and bacteriological examinations of samples were made during the two years 1889-90 and '90-91; and the results of these analyses were published in the Fourteenth Annual Report, pages 262-66. The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1889-90 -----	.04	37.1	30.4	6.7	1.97	.028	.137	.0003	.06	17.	1.93
1890-91 -----	.04	44.5	35.5	9.0	1.94	.019	.134	.0008	.05	---	---

### WATER SUPPLY OF MIDDLETOWN.

Population in 1896, 18,000. The works are owned by the city, and were built in 1863. The average daily consumption is 1,000,000 gallons. The estimated population supplied with water is 12,000, and the average daily consumption per capita is 85 gallons.

The source of supply is Laurel Brook. A storage and distributing reservoir, known as Laurel Brook Reservoir, is located about 3 miles southwest of the city, which it supplies by gravity. The reservoir was formed by an earthen dam across a ravine enclosing an area which was swampy and boggy. It is 168 feet above the business street and 45 feet above the highest residence. The area is 69 acres and its capacity 220,000,000 gallons. The average depth is 8 feet, and about one-seventh of the total area is shallow flowage. The bottom is muddy. No surface loam was removed except for construction of the dam.

The water is shallow near the shores, but these are free from bushes, as a dike and driveway extend around the reservoir. The shallow flowage has abundant growths of water plants and floating algae. The water plants are systematically removed as soon as they attain their growth. During May, June and July the water often has a fishy odor, although it does not occur every year. This fishy odor is caused chiefly by *Uroglena Volvox*.

The watershed, 1.05 square miles in area, is hilly, consisting mostly of cultivated and pasture land, with only a small proportion of woodland. The population on the watershed is about 25.

The water is drawn very low at times, and a new reservoir is contemplated with a subsequent removal of the surface loam from the old reservoir. The total length of mains is about 24 miles.

Chemical, microscopical and bacteriological examinations of samples were made during the years 1889-20 and '90-91, and the

results of these analyses were published in the Fourteenth Annual Report, pages 267-71. The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as $\text{CaCO}_3$ .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1889-90 .....	.06	45.2	35.9	9.3	2.43	.060	.169	.0018	.10	---	---
1890-91 .....	.06	38.3	30.3	8.0	2.15	.030	.265	.0010	.05	19.	2.90

#### WATER SUPPLY OF NAUGATUCK.

Population in 1890, 6,218. The works are owned by the Naugatuck Water Company, and were begun in 1838. The franchise provides neither for control of rates nor purchase of works by the borough. Consumption unknown.

The source of supply is surface water from Straitsville Brook. Prospect Reservoir, a storage reservoir, was built in 1891, and is located about 3 miles east of the borough. The reservoir was formed by a masonry dam 300 feet long and 20 feet high. Its capacity is 100,000,000 gallons. This distributing reservoir has a capacity of 7,000,000 gallons and distributes by gravity.

The watershed, 2.5 square miles in area, is very hilly and is mostly woodland.

A new reservoir is to be built on Mulberry Hill. The total length of mains is 16 miles.

Chemical and microscopical examinations of samples were made during 1895, and the results of these analyses were published in the Eighteenth Annual Report, pages 207-8. The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as $\text{CaCO}_3$ .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1895 .....	.3	36.4	23.0	13.4	2.05	.034	.119	.0007	.06	6.	3.55

## WATER SUPPLY OF NEW BRITAIN.

Population in 1896, 25,000. The works are owned by the city. Water was first introduced in 1857. A canal was constructed in 1882, and a new dam and canal completed in 1894. The average daily consumption is 1,500,000 gallons. The estimated daily consumption per capita is 50 gallons.

The source of supply is Shuttle Meadow Lake, which is located 175 feet above and 2.5 miles southwest of the city. It supplies a distributing reservoir by gravity. The area of the lake is 200 acres and its capacity 1,500,000,000 gallons. The average depth is 18 feet, and the bottom is sandy and rocky. There is little shallow flowage. The reservoir is fed by springs and the watershed, there being no brooks or streams. The drainage area, 1,521 acres, is composed of a rolling valley and steep hilly woodlands. The population on the watershed is equal to about 23 per square mile. Only one house is situated near the reservoir. No surface loam was removed. During the warm months very abundant vegetable growths occur, accompanied at times with a disagreeable odor. The total length of mains is 50 miles.

Chemical, microscopical and bacteriological examinations of samples were made during the years 1889-90 and 1890-91, and the results of the analyses were published in the Fourteenth Annual Report, pages 257-61.

Chemical and microscopical examinations were made during 1894, and the results of the analyses were published in the Seventeenth Annual Report, pages 281-83.

The averages of the chemical examinations are given below.

	Color.	RESIDUE ON EVAPORATION.				NITROGEN OF				Hardness as $\text{CaCO}_3$ .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1889-90 -----	.08	61.5	50.8	10.7	2.00	.024	.183	.0003	.05	---	---
1890-91 -----	.10	59.5	48.1	11.4	1.81	.065	.358	.0004	.04	32.	3.79
1894 -----	.20	50.0	36.7	13.3	2.09	.063	.351	.0009	.07	28.	4.50



## WATER SUPPLY OF NEW CANAAN.

Population in 1896, 3,000. The works were built in 1894 by the New England Public Works Company of New Haven, and are now owned by the New Canaan Water Company. About 100 families are supplied by 7 miles of distributing mains.

The sources of supply are from springs and the upper and western branches of the Five Mile River. New Canaan Reservoir, an artificial reservoir, has an area of 12 acres, and a capacity of 45,000,000 gallons. The average depth is 10 feet and the bottom is of gravel. There is little or no shallow flowage. No surface loam was removed, but the ground was cleared and burned over. The reservoir supplies the borough by gravity. The drainage area, which is not large, is composed of hilly woodlands and cultivated fields. There are five dwellings upon the watershed.

## WATER SUPPLY OF NEW HAVEN.

Population in 1895, 96,000. The city is supplied with water by the New Haven Water Company. The works were begun in 1859, by building a reservoir (Lake Whitney) on Mill River. An additional supply was purchased in 1876, from the Fair Haven Water Company. This property included Maltby Ponds and Lake Wintergreen.

In 1882, an additional supply was obtained from Lake Saltonstall by laying a 24-inch main, and erecting a pumping plant with a capacity of 6,000,000 gallons.

A further supply was obtained in 1891, by constructing storage reservoirs on West and Sargent Rivers. New Haven, and about 50 houses in East Haven, are supplied.

The estimated average daily consumption is 13,700,000 gallons and the average daily consumption per capita is 142 gallons.

*Whitney Lake.*—Whitney Lake is an artificial lake and was made by constructing a dam across Mill River. The lake is about 2.5 miles in length, and is located 2.5 miles from the center of the city. It has an area of 400 acres. It is deep along the river channel but shallow at the sides and in a large area at the upper end. The average depth is 20 feet and the capacity is 800,000,000 gallons. The bottom is rocky and muddy. Little or no surface loam was removed and vegetable growths are abundant; usually in April or May, the water has a fishy and disagreeable odor during the period when the vegetable growths are most



abundant. At such times large numbers of *Uroglana Volvox* have been found in the lake.

The drainage area of Mill River is about 56 square miles and drains an agricultural region. The banks along the river are quite thickly settled and a number of factories use the water for power. The population on the watershed, estimated from the new topographical map of Connecticut and the United States Census reports for 1890, is 3,240, equal to a population of 57 per square mile. One-third of the population of the entire watershed, including four villages, is settled on or near the river directly above the reservoir.

The water is raised by both water and steam power to Prospect Hill, upon which is located the distributing reservoir. This reservoir has a capacity of 10,000,000 gallons and was constructed with a dividing wall, making two compartments. The filtration of Whitney Lake water is under consideration.

*Maltby Ponds.*—The Maltby Ponds are storage and distributing reservoirs, three in number, and have a combined area of 45 acres and a capacity of 132,000,000 gallons. The reservoirs are comparatively shallow with rocky banks. The bottoms are rocky and muddy. The surface soil was removed in part. The drainage area, 1.25 square miles, is hilly and mostly wooded. There are no factories on the watershed and but two dwelling-houses. This supply reaches the city by gravity and constitutes only a small portion of the consumption.

*Wintergreen Lake.*—This lake is a storage and distributing reservoir, located about 3.5 miles northwest of the city.

The area of the reservoir is 44 acres, and the capacity 160,000,000 gallons. The bottom is rocky and muddy. Most of the surface soil was removed. The watershed, 1.14 square miles in area, is hilly and wooded. The total population upon the watershed is about 88. This is a gravity supply.

*Dawson Lake System.*—This system includes three artificial reservoirs built on West River, and its tributary, Sargent River.

Dawson Lake, the distributing reservoir, is located about 6 miles northwest of the city, and distributes by gravity. The area of the reservoir is 60 acres, and its capacity 300,000,000 gallons. The bottom is rocky and sandy. The surface soil was partly removed. A fishy odor is sometimes present in May or June.

Two storage reservoirs, Chamberlain Reservoir on Sargent River and Bethany on West River, complete the development of the system.

Chamberlain Reservoir, with a watershed of 4 square miles, is located 2 miles above Dawson Lake. The area is 35 acres and its capacity 180,000,000 gallons. The bottom is of muck and rock. The surface soil was partly removed. A bolt factory is located higher up on Sargent River.

Bethany Reservoir, with a watershed of 3.65 square miles, is located about 4 miles above Dawson Lake. The area is 100 acres and its capacity 600,000,000 gallons. The bottom is of muck and rocks.

The total area of the watershed is 13.47 square miles. It is hilly, one-half woodland and the other half pastures and cultivated fields. The estimated population on the watershed is 390, equal to a population of 29 per square mile.

*Saltonstall Supply.*—Lake Saltonstall is a natural lake, the capacity of which is increased by a dam at the outlet. It is used as a storage reservoir; the lake is located about 4 miles northeast of the city, and the water is pumped into a small distributing reservoir. The area of the lake is 400 acres and its capacity 1,395,000,000 gallons. The depth varies from 10 to 107 feet and the bottom is supposed to be rocky. The banks are rocky on the west and mostly of loam on the east shore. The drainage area, 3.33 square miles, is composed of steep rocky woodland on the west and low rolling pasturage on the east. The lake is supposed to be fed by numerous springs. The color in the water as supplied to the mains is largely due to a highly-colored brook which discharges into the lake near the intake. There are no factories or dwelling houses on the watershed. The distributing reservoir, is located on South Quinnipiac Street, East Haven, and has a capacity of 7,000,000 gallons.

It is contemplated to store in Lake Saltonstall an additional supply from Farm River, connecting the two by means of a tunnel. Farm River, at this point, would have a drainage area of 16.77 square miles and a population of 916, equal to a population of 55 per square mile.

The total length of mains is 150 miles.

Chemical, microscopical and bacteriological examinations of samples were made of Lake Whitney during the two years, 1889-'90 and '90-'91, and the results of the analyses were published in the Fourteenth Annual Report, page 271-76. Chemical and microscopical examinations were also made during 1895, and the results of the analyses were published in the Eighteenth Annual

Report, pages 209-10. Chemical, microscopical and bacteriological examinations of samples were made of Wintergreen Lake in 1889-'90, and the results of the analyses were published in the Fourteenth Annual Report, pages 277-79. Similar examinations were made of Lake Saltonstall in 1890-91, and the results can be found in the same report, pages 279-81.

Chemical and microscopical examinations were made of samples from Dawson Lake in 1894, and the results of the analyses were published in the Seventeenth Annual Report, pages 286-7.

The averages of the chemical analyses are found below.

Year.	Color.	RESIDUE ON EVAPORATION.				NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Am- monia.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
Lake Whitney, 1889-90 .....	.05	61.6	54.3	7.3	2.73	.021	.125	.0023	.14	---	---
Lake Whitney, 1890-91 .....	.13	57.0	51.8	5.2	2.70	.023	.137	.0018	.10	33.	2.54
Lake Whitney, 1895 .....	.30	63.0	49.5	13.7	3.20	.020	.123	.0020	.09	31.	3.22
Wintergreen Lake 1889-90 .....	.2	36.3	24.9	11.4	2.70	.026	.174	.0011	.04	---	---
Saltonstall Lake, 1890-91 .....	.08	50.2	41.7	8.5	3.70	.012	.147	.0060	.02	25.	3.54
Dawson Lake, 1894 .....	.3	42.6	30.8	11.8	2.81	.029	.202	.0004	.09	15.4	4.00

#### WATER SUPPLY OF NEWINGTON.

Population in 1890, 953. The works are owned by the Newington Water Company, and were built in 1866.

The source of supply is from springs and a stream on Cedar Mountain. The supply is a small one and distributes to the few consumers by gravity. The total length of mains is 2.5 miles.

#### WATER SUPPLY OF NEW LONDON.

Population in 1896, 15,500. The works are owned by the city and were begun in 1872. An additional supply main was laid in 1889. The average daily consumption in 1896 was 1,244,320 gallons, and supplied a population of 14,000, giving a daily consumption of 83 gallons per capita.

The source of supply is Lake Konomoc, which is a natural lake raised 10 feet by a dam 200 feet in length. It is situated 180 feet above tide level, and about 6 miles from the city, which it supplies by gravity. The area is 225 acres; capacity, 600,000,000 gallons; bottom muddy in center with sandy shores. The surface loam was removed along the upper 10 feet of contour line, but during the dry periods the sand has been exposed. Vegetable growths are abundant, and in spring especially the water has a fishy taste. There are about 65 acres of shallow flowage. The drainage area, containing 1375 acres, including water surface, is composed of one-half hilly woodland and the rest sandy pasturage and cultivated fields. There are no factories upon the watershed, and but 12 dwelling-houses, which would indicate a population of 60, or about 33 per square mile.

A high service tank, which is supplied by pumping, has a capacity of 90,100 gallons, and was constructed in 1890 for fire purposes. A small additional supply for manufacturing purposes is now in process of construction. The total length of distributing mains is 43.1 miles.

Chemical and microscopical examinations were made of samples from New London during the year 1894, and the results of the analyses were published in the Seventeenth Annual Report, 280-81.

The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1894 .....	.2	29.2	20.2	9.0	3.28	.024	.170	.000	.04	7.	2.94

#### WATER SUPPLY OF NEW MILFORD.

Population in 1896, 1,800. The works are owned by the New Milford Water Company and were begun in 1873. The company was granted a perpetual charter, which neither controls rates nor gives the town the right to purchase works. An additional storage reservoir was built in 1882. The population supplied is 1,200. The consumption is unknown.



The source of supply is surface water from a tributary to Great Brook. Two artificial impounding reservoirs have been built and a third reservoir for storage is contemplated, the capacity of which will be about 25,000,000 gallons.

Reservoir No. 1, the distributing reservoir, is located 1.5 miles northeast of the village. It has an area of 2 acres and a capacity of 4,000,000 gallons. The bottom is muddy, and the surface loam was removed. A filter built of brick and filled with alternate layers of sand, gravel and charcoal, filters the water before it passes into the distributing mains.

Reservoir No. 2, a storage reservoir, is located a short distance above the distributing reservoir. Its area is 3.5 acres and capacity 11,000,000 gallons.

The bottom is muddy and the surface soil was not removed. The location of the new storage reservoir will be a short distance above Reservoir No. 2 on the same stream.

The entire drainage area of the system is about 600 acres, and is hilly woodlands and pastures. There is no contamination on the watershed. It is a gravity supply. In September, 1895, there was a deficiency in the supply. The total length of mains is 7 miles.

#### WATER SUPPLY OF NORFOLK.

Population in 1896, 1,500. The works are owned by the Norfolk Water Company and were begun in 1894. About 100 families are supplied.

The source of supply is from Lake Wungum, located about four miles west of the village. Lake Wungum is a natural lake and is fed by numerous springs. It is 300 acres in area; bottom rocky. The watershed, about one square mile in area, is very hilly and largely woodland. There are four dwelling-houses upon the watershed. Water is distributed by gravity.

The total length of mains is 7.75 miles.

#### WATER SUPPLY OF NORTH CANAAN.

Population in 1896, 1,000. The works are owned by the North Canaan Water Company, and were built in 1879. The franchise granted to the company provides neither for control of rates nor purchase of works by the village. The daily average consumption is 100,000 gallons, and the daily average consumption per capita is 125 gallons.



The source of supply is an artificial impounding reservoir. It is fed chiefly by springs and is located about 2 miles southeast of the village, which it supplies by gravity. The area is one-third of an acre, and its capacity 800,000 gallons. The average depth is 6 feet and the bottom is of sand and hardpan. There is considerable shallow flowage. The surface soil was removed, but the bottom is now covered with vegetable growths. The watershed, small in area, is on a densely wooded mountain slope and there is no contamination. The total length of mains is about 4.5 miles.

Chemical examinations were made in February and July, 1894, and were published in the Seventeenth Annual Report, page 295. Below are given the averages of these examinations.

Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
.0	113.6	109.6	4.0	0.92	.010	.050	.000	.06	79.	0.62

#### WATER SUPPLY OF NORWALK.

Population in 1896, 7,000. The works were begun in 1871 by the borough of Norwalk, and since January, 1894, have been owned by the city of Norwalk.

Norwalk, Winnipauk, and a part of South Norwalk are supplied. It is estimated that 4,000 persons are supplied. The daily average consumption is 800,000 gallons, equal to a daily average consumption of 175 gallons per capita.

The sources of supply are two impounding, storage reservoirs, located on Silver-mine Brook, supplying a distributing reservoir.

Grape Reservoir, the first storage reservoir built on Silver-mine Brook, is about 6.5 miles north of the city and 292 feet above tide-water. The area of the reservoir is 28 acres; its capacity 65,000,000 gallons; its average depth 10 feet, with about 5 acres of shallow flowage. The bottom is sandy and rocky. The reservoir dam is of stone masonry, with earth backing, 230 feet in length and 32 feet in height. No surface soil was removed, and during drought, usually in August and September, the water has

a fishy odor. The watershed, 7 square miles in area, excluding the watershed of the upper storage reservoir, is very hilly; one-half of which is woodland and the rest is about equal parts of pasture and cultivated land. The population on the watershed, estimated from the State topographical map, is equal to 86 per square mile. There are no factories on the stream.

Lewisboro Reservoir, a storage reservoir, is located near the head of Silver-mine Brook, 10 miles north of Norwalk, and was built in 1883 to increase the storage capacity of the works. The reservoir dam is of earth and masonry, 125 feet in length and 30 feet in height. The area of the reservoir is about 12.5 acres; its capacity 30,000,000 gallons. The average depth is 12 feet, with a sandy bottom. The surface soil was not removed. The watershed, about 3 square miles in area, is very hilly; one-half is woodland and the rest is cultivated. The distributing reservoir is circular in form, 260 feet in diameter and 16 feet in depth, and 192 feet above tide-level. It is constructed on Step Hill in the western part of the city.

The population on the total watershed is about 67 per square mile. The pressure is about 80 lbs. There are about 20 miles of mains.

Several years ago there was a deficient supply for a period lasting twenty days, but no additional supply is at present contemplated.

Chemical and microscopical examinations were made of samples from Norwalk during the year 1894, and the results of these analyses were published in the Seventeenth Annual Report, pages 293-4.

The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1894.....	.5	48.1	36.0	13.1	2.66	.025	.221	.0004	.05	17.	5.33

## WATER SUPPLY OF NORTH MANCHESTER.

Population in 1896, 2,000. The works are owned by the Manchester Water Company, and were begun in 1889. A perpetual franchise was granted the company. Estimated population supplied, 1,000. Consumption unknown. The source of supply is from an impounding reservoir on White's Brook. The reservoir is located 4.5 miles east of the village, which it supplies by gravity. The total length of mains is 12 miles.

## WATER SUPPLY OF NORWICH.

Population in 1896, 25,000. The works are owned by the city, and were built in 1868 and 1869. The estimated population supplied is 20,000. The average daily consumption in 1896 was about 1,500,000 gallons, equal to a daily consumption of 75 gallons per capita.

The source of supply is from Fairview Reservoir, an artificial storage and distributing reservoir, located 2.5 miles north of the city. The reservoir is 240 feet above mean-tide; it distributes by gravity and gives a pressure of 90 pounds in the business portion of the city. The reservoir, fed by springs and small brooks, was made by an earthen dam, with a masonry core wall, across a ravine. The dam is 25 feet high and 468 feet long. The reservoir has an area of 66 acres; capacity 350,000,000 gallons; average depth 16.5 feet, with very little shallow flowage; bottom rocky and sandy.

The surface loam was removed, two filtering dams were built at the inlets of the tributary streams, and the shores are protected to a depth of 4 or 5 feet by vertical stone walls. There are no vegetable growths. The watershed, 483 acres in area, is very hilly, one-half woodland and the rest pasture land. There is no cultivated land and there are no dwelling-houses upon the watershed.

To increase this supply a 24-inch main, 7,160 feet in length, was laid in 1881, connecting Meadow Brook with Fairview Reservoir. This additional supply furnishes the reservoir with a large quantity of water. It is proposed to construct a dam on Meadow Brook, forming an additional storage reservoir. It will have an area of 200 acres; capacity 1,000,000,000 gallons; length 7,000 feet and width 1,250 feet. A removal of the surface loam would furnish a less colored water and prevent vegetable growths. The

watershed, 780 acres in area, is hilly and composed of woods and cultivated fields. The population on the watershed is about 63, equal to a population of 52 per square mile.

The total length of mains is 41.5 miles.

Chemical, microscopical and bacteriological examinations were made of samples from Norwich during the years 1889-'90 and '90-'91, and the results of the analyses were published in the Fourteenth Annual Report, pages 287-91.

Chemical examinations were made of samples during February and July, 1894, and the results of these analyses were published in the Seventeenth Annual Report, page 297.

The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.				NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1889-90..	.2	36.9	26.4	10.5	2.26	.022	.144	.0009	.07	---	---
1890-91..	.35	34.6	26.4	8.2	2.67	.033	.160	.0005	.04	8.	4.69
1894.....	.45	35.8	25.0	10.8	2.74	.015	.229	.0000	.07	7.	5.20

#### WATER SUPPLY OF PLAINVILLE.

Population in 1896, 2,000. The works are owned by the Plainville Water Company and were built in 1884.

The source of supply is by gravity from Crescent Lake, an artificial reservoir, located about 2 miles southeast of the village. It stores the surface water from a small watershed and is 53 acres in area. The average depth is 10 feet; bottom rocky, with a great deal of muck in the center. No surface soil was removed and there is considerable shallow flowage. The watershed, 325 acres in area, is hilly and mostly wooded. There is no pollution on the watershed. The water has a disagreeable vegetable odor several times each year, which is probably due to vegetable organisms. The total length of mains is 7 miles.

#### WATER SUPPLY OF PORTLAND.

Population in 1895, 4,977. The works are owned by the Portland Water Company, and were built in 1889. The company obtained a perpetual charter, but the town has the option of buy-



ing the works at any time, the price to be determined by arbitration or by commissioners appointed by the court.

The source of supply is by gravity from Somasic Reservoir. It impounds the surface water from Somasic brook and is located about 4 miles northeast of the town. The area of the reservoir is 24 acres ; average depth 14 feet. There is considerable shallow flowage and the bottom is mostly of hard-pan and rock. No surface loam was removed. The watershed, 3.5 square miles in area, is very hilly and almost entirely covered with woods. There are but two houses upon the watershed. No bad odors have been reported in the water and there is no pollution. The total length of mains is about 14 miles.

#### WATER SUPPLY OF PUTNAM.

Population in 1895, 6,884. The works are owned by the Putnam Water Company and were constructed in 1885. The franchise of the company does not regulate rates but provides that the city may purchase the works at any time, the price to be determined by arbitration. The estimated population supplied with water is 6,800. The average daily consumption is 350,000 gallons, equal to a daily consumption of 51.3 gallons per capita.

The source of supply is surface water from Muddy Brook; pumping to stand-pipe. The intake on Muddy Brook is above Harrisville in the town of Woodstock and about 2.5 miles west of the city of Putnam. The water was pumped by water power, which had supplied all demands until 1891, when an auxiliary steam pump was added and a still larger steam plant is contemplated. The watershed of Muddy Brook at the pumping station, estimated from the topographical map, is 36.74 square miles. It is mostly a farming region, with few woodlands but many cultivated fields and pastures. The estimated population on the watershed is 1,985, equal to a population of 54 per square mile. The total length of mains is about 15 miles.

Chemical examinations were made of samples from Putnam in January, February and July, 1894, and the results of the analyses were published in the Seventeenth Annual Report, page 296.

The averages of the chemical analyses are given below. Chlorine determinations were made in monthly samples during the year and gave an average of 2.34.



	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not fil- tered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1894 -----	.4	41.7	31.0	10.7	2.10	.016	.136	.000	.11	16.	4.62

## WATER SUPPLY OF ROCKVILLE.

Population in 1896, 9,000. The works are owned by the Rockville Aqueduct Company and were built in 1847.

The source of supply is Schenipset Lake, a natural lake. It was enlarged and its capacity greatly increased in 1867 by building a masonry dam at the outlet, 50 feet in length and 18 feet in height.

The city neither controls rates nor has the right to purchase works. Schenipset Lake supplies the city by gravity and is 280 feet above the lowest part of the city. There is an ordinary pressure of 75 pounds on the mains. The lake has an area of 624 acres ; maximum depth 75 feet ; bottom sandy. The watershed is 15.6 square miles in area, excluding the water surface, and the larger portion is woodland, although the cultivated portion is quite extensive. The population upon the watershed is about 434, equal to a population of 20 per square mile. Near the dam of the lake are boat houses and wharves. On the west shore are picnic grounds. Total length of mains is about 18 miles.

Chemical, microscopical and bacteriological examinations were made of samples from Rockville during the year 1890-91 and the results of the analyses were published in the Fourteenth Annual Report, pages 281-3.

The averages of the chemical analyses are given below :

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1890-91 -----	.15	31.3	21.4	9.9	1.66	.027	.194	.0008	.03	7.	4.23

## WATER SUPPLY OF SHARON.

Population in 1896, 600. The works are owned by the Sharon Water Company and were built in 1888. The franchise provides neither for control of rates nor the purchase of the works by the village. The estimated population supplied is about 450 and the daily average consumption is 20,000, making a daily consumption of 45 gallons per capita.

Reservoir No. 1, or Beardsley Pond, a storage and distributing reservoir, is located about 1.5 miles northeast of the village. It is supplied by springs; the water flows about 30 acres and has an average depth of 6 feet, with about one-third shallow flowage. The bottom is sandy and muddy; no surface loam was removed. Droughts have exposed the shores and vegetable growths are abundant on the exposed surfaces, causing disagreeable odors and tastes in the water. The drainage area, about 200 acres, excluding the water surface, lies entirely to the east of the pond and is a steep mountain slope covered with woods.

Reservoir No. 2, a distributing reservoir, is located about 1.5 miles east of the village. It is fed by springs and has a capacity of 4,000,000 gallons; average depth about 6 feet; bottom hard pan and the surface loam was removed. The water is filtered by a filter composed of alternate layers of charcoal and fine gravel. Both sources distribute by gravity. Total length of mains, 4 miles.

## WATER SUPPLY OF SHELTON.

Population in 1890, 1,362. The works are owned by the Shelton Water Company and were begun in 1879. The franchise provides neither for control of rates nor purchase of works by the borough. The estimated daily average consumption is about 200,000 gallons.

The source of supply is surface water from Curtis Brook.

Reservoir No. 1, a distributing reservoir, is located half a mile from, and 230 feet above, the borough. It has an area of three-fourths of an acre and distributes by gravity.

Reservoir No. 2, a storage reservoir, is located one mile above the distributing reservoir on the same stream. The reservoir dam is made of earth, sheet piled and puddled with clay. It has an area of 18 acres, and a capacity of 50,000,000 gallons.

The ordinary pressure is 90 pounds. The total length of mains is 5.5 miles.

## WATER SUPPLY OF SIMSBURY.

Population in 1890, 1,874. The works are owned by the Simsbury Water Company and were built in 1873.

Consumption unknown.

The source of supply is surface water from streams and springs. An impounding reservoir distributes by gravity.

## WATER SUPPLY OF SOUTH MANCHESTER.

Population in 1896, 6,500. The works are owned by the South Manchester Water Company. Taylor Reservoir was built in 1870, and Porter Reservoir, an additional supply, in 1890. The estimated population supplied is 5,000.

Taylor Reservoir, a storage and distributing reservoir, is located 1.5 miles southeast of the village. The reservoir is fed by small brooks and springs; its area is 5 acres; capacity, 9,000,000 gallons; average depth, 5.5 feet, with about four-fifths of the area shallow flowage. The bottom is sandy and rocky. The surface soil was removed and no vegetable growths are reported in the water. The watershed, 0.86 square miles in area, is hilly, one-half of which is woodland, and the remainder pasture and cultivated land. The reservoir distributes by gravity.

Porter Reservoir, a storage and distributing reservoir, is located 2.5 miles east of the village. The reservoir is filled from Turey and Porter Brooks and springs; its area is 9.1 acres; capacity 35,000,000 gallons; average depth 12 feet, with very little shallow flowage. The bottom is rocky and gravelly. The surface loam was removed and the water has no vegetable growths or bad odors. The watershed, 1.5 square miles in area, is mostly hilly woodland. The population on the watershed is about 28, equal to a population of 18 per square mile. Sand filter beds are located above Porter Reservoir on Turey and Porter Brooks. The reservoir distributes by gravity.

The total length of mains is 23.5 miles.

Chemical examinations were made of samples from Taylor Reservoir, South Manchester, during February and July, 1894, and the results of the analyses were published in the Seventeenth Annual Report, page 297.

The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as $\text{CaCO}_3$ .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1894 -----	.15	35.3	29.5	5.8	1.74	.006	.082	.000	.08	8.	1.85

#### WATER SUPPLY OF SOUTH NORWALK.

Population in 1896, 7,500. The works are owned by the city and were begun in 1875, when the upper reservoir was built. An additional reservoir was constructed in 1890, and in 1891 East Norwalk was supplied by laying a main across the harbor. The estimated daily average consumption is 1,000,000 gallons. The sources of supply are three impounding reservoirs on a tributary to Silvermine Brook.

Reservoir No. 2, or City Lake, is located about 5 miles north of the city. The area of the reservoir is 150 acres, and its capacity 500,000,000 gallons. The average depth is from 10 to 12 feet. The reservoir is fed by large springs and from the overflow of Reservoir No. 1. Only a small portion of the surface loam was removed and the water supplied to consumers has at times fishy and vegetable odors.

Reservoir No. 1, or Rock Lake, is located about one-half of a mile above Reservoir No. 2. The area is 29 acres, and its capacity 160,000,000 gallons. The reservoir is filled by surface water from brooks, and acts as a feeder for Reservoir No. 2.

The two reservoirs constitute the chief supply. Their combined watershed is 2.64 square miles. The population on the watershed, estimated from the topographical map of Connecticut, is 137, equal to a population of 52 per square mile. The region is principally pasture and meadow land. Reservoir No. 2 distributes by gravity.

Reservoir No. 3, an artificial reservoir, is located below the other reservoirs on the same stream. This supply is by gravity, but is used only in cases of emergency. The area is about 10



acres and its capacity 12,000,000 gallons. The average depth is 6 feet with a muddy bottom. The surface loam was removed, but the water has fishy and vegetable odors. The watershed, .42 of a square mile in area, has a population equal to 65 per square mile.

The question of filtration has been contemplated and plans and specifications presented to the town meeting, but no favorable action taken. The total length of mains is 26 miles.

#### WATER SUPPLY OF SOUTHTON.

Population in 1896, 6,500. The works are owned by the Southington Water Company and were begun in 1883. The franchise provides neither for control of rates nor purchase of works by the borough, but the borough took one-fourth of the shares of the company. Plantsville is also supplied. The estimated population supplied is 4,200. The average daily consumption is about 1,000,000 gallons in summer and 600,000 gallons in winter. The source of supply is from impounding and distributing reservoirs on Humiston's Brook.

Wolcott Reservoir, a storage reservoir, is formed by an earth dam 525 feet long and 30 feet high, having a stone masonry and puddle-heart wall, and is located 5 miles west of the borough. It is 23 acres in area; capacity, 63,000,000 gallons; average depth, 12 feet; bottom, gravel; shallow flowage about 3 acres. One-third of the area was stripped of loam.

The distributing reservoir is located about 4 miles west of the borough. It is 3 acres in area; capacity, 3,000,000 gallons; average depth, 9 feet; bottom, rock and gravel. Most of the surface loam was removed. This reservoir distributes by gravity and is about 230 feet above the borough.

The total watershed, 3 square miles, is composed of hilly woodland with very little cultivated land. There is no contamination on the watershed. The ordinary pressure is 98 pounds. Total length of mains is 14 miles.

Chemical and microscopical examinations were made of samples from Southington during the year 1894, and the results of the analyses were published in the Seventeenth Annual Report, pages 284-5.



The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1894 .....	.4	28.6	18.7	9.9	1.94	.017	.118	.000	.04	7.3	3.36

#### WATER SUPPLY OF STAFFORD SPRINGS.

Population in 1890, 2,353. The works are owned by the Stafford Springs Water Company and were built in 1887. The franchise provides neither for control of rates nor purchase of works by the borough. The source of supply is surface water from two impounding reservoirs located on Roaring Brook.

Reservoir No. 1, a distributing reservoir, is located about 5 miles from and 285 feet above the village. It has a capacity of 500,000 gallons.

Reservoir No. 2, a storage reservoir, is located a short distance above the distributing reservoir on the same stream. It has a capacity of 25,000,000 gallons.

The watershed, 1.88 square miles in area, is composed of steep abrupt woodland and some cultivated field. The population on the watershed is about 36, equal to a population of 18 per square mile.

The ordinary pressure is 128 lbs.

The total length of mains is about 10.5 miles.

Chemical examinations were made of samples from Stafford Springs during Feb. and July, 1894, and the results of the analyses were published in the Seventeenth Annual Report, page 296.

The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia not filtered.	Nitrites.	Nitrates.		
1894 .....	4.	37.8	26.8	11.0	1.57	.019	.204	.0005	.09	8.	2.28

## WATER SUPPLY OF STAMFORD.

Population in 1896, 18,000. The works are owned by the Stamford Water Company and were begun in 1896. The population supplied is about 12,000. The average daily consumption is 1,500,000 gallons, equal to a daily consumption of 125 gallons per capita.

The source of supply is surface water from Mill River by gravity to Simsbury Reservoir—a distributing reservoir. The water is taken from Coxes Pond, a storage reservoir on Mill River, located about 5 miles north of the city. The storage reservoirs on Mill River are three in number : Trinity Lake, Mud or Mead Pond and Coxes Pond.

Trinity Lake, located near the head of Mill River and about 7 miles above Coxes Pond, is a natural lake with its capacity increased by a dam. It is 85 acres in area with about 5 acres shallow flowage ; available capacity, 450,000,000 gallons ; average depth, 40 feet ; bottom, sand and limestone. The surface loam was not removed.

Mead Pond is located about 5.5 miles above Coxes Pond. It is 45 acres in area with fully one-fifth of the area shallow flowage ; capacity, 80,000,000 gallons ; average depth, 10 feet ; bottom muddy. Some of the surface loam has been removed.

Coxes Pond is 2.15 acres in area, with about one-fifth shallow flowage ; available capacity, 40,000,000 gallons ; average depth, 10 feet ; bottom sandy and muddy. Most of the surface loam has been removed.

The watershed of Mill River, at the point from which the water is taken, is 24 square miles. The region is hilly and is composed mostly of cultivated fields and pastures. The population on the watershed, estimated from the topographical map of the state and the United States census for 1890, is 1,320, equal to a population of 55 per square mile. Vegetable growths and odors are noticeable in the water during the dry season when the river is low.

Simsbury Reservoir, the distributing reservoir, is located about 1.5 miles north of the city. It is 170 feet above tide level and distributes by gravity. The reservoir is built in excavation and embankment ; bottom rock ; area, 1.5 acres ; capacity, 5,900,000,000 gallons.

The total length of mains is 40 miles.

Chemical, microscopical and bacteriological examinations were made of samples taken from a tap in the city in 1889-90, and the results of the analyses were published in the Fourteenth Annual Report, pages 307-9. The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.				NITROGEN OF				Hardness as $\text{CaCO}_3$ .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic	Chlorine.	Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1889-90 -----	.16	51.9	43.1	8.8	2.21	.014	.120	.0008	.07	----	----

#### WATER SUPPLY OF STONINGTON, GROTON AND MYSTIC.

Population of Stonington, Groton and Mystic in 1895, about 12,845. The works are owned by the Mystic Valley Water Company, and were built in 1888. The average daily consumption in 1895 was 294,878 gallons, equal to a daily consumption of 23 gallons per capita.

The source of supply is Mistuxet Brook. The water is stored in a storage reservoir located about half way between the Borough of Stonington and the Fire District of Mystic. The reservoir is about 54,000 square feet in area; average depth 10 feet; bottom rocky and sandy, with some mud near the dam. The surface soil was removed 6 feet below and 1.5 feet above the flow line. There are no bad odors reported and the brook receives no pollution. The watershed is mostly hilly woodland and pasture.

The water is pumped from the storage to the distributing reservoir, which is located about two miles west of the Borough of Stonington. It is circular in form, 190 feet in diameter, 28,352 square feet in area with an average depth of 13 feet.

Total length of mains is about 15.5 miles.

Chemical examinations were made of samples from the Stonington supply during Feb. and July, 1894, and the results of the analyses were published in the Seventeenth Annual Report. The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.				NITROGEN OF				Hardness as $\text{CaCO}_3$ .	Oxygen, Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammo- nia, not filtered.	Aluminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1894 -----	.45	41.3	30.3	11.0	5.48	.009	.178	.000	.06	11.5	5.25

### WATER SUPPLY OF TERRYVILLE.

Population in 1896, 1,200. The works are owned by the Terryville Water Company and were built in 1891. The estimated population supplied is about 450.

The source of supply is from springs, located upon a hill about three-fourths of a mile southwest of the village.

The well or reservoir, 90 feet in diameter and 25 feet in depth, is stoned and the bottom covered with small stones and gravel. The watershed, estimated about 30 acres in area, is the summit of a wooded hill. There are no buildings or sources of contamination of any kind upon it and the land is used for no other purpose.

The village is supplied by gravity. The total length of mains is about 2 miles.

### WATER SUPPLY OF THOMASTON.

Population in 1896, 3,300. The works are owned by the Thomaston Water Company and were built in 1880. The franchise of the Company neither controls the rates nor gives the town the right to purchase works. Estimated population supplied is 1,750. Consumption of water unknown.

The source of supply is from springs and a small brook. An impounding reservoir, called the Thomaston Reservoir, is located about 2 miles northeast of the town and the water flows by gravity with an ordinary pressure of 126 pounds.

The area of the reservoir is about 20 acres; average depth 10 feet; bottom rocky and muddy. The flooded area was a swamp from which the muck and surface loam was not removed. It has a large area of shallow flowage. The water has abundant vegetable growths during the summer months which cause very offen-



sive odors and tastes. The watershed, 437 acres in area, is hilly, consisting mostly of meadows and pastures. The reservoir during the summer usually stores the entire yield of the watershed. The population on the watershed is 67, equal to a population of 97 per square mile. The total length of mains is about 8 miles.

Chemical, microscopical and bacteriological examinations were made of samples from Thomaston during the years 1889-'90, and '90-'91, and the results of the analyses were published in the Fourteenth Annual Report, pages 292-5.

Chemical and microscopical examinations were also made of samples in 1894, and the results were published in the Seventeenth Annual Report, pages 291-2. The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1889-90-----	.2	34.6	21.6	13.0	1.51	.058	.229	.0009	.07	---	---
1890-91-----	.2	32.0	29.4	12.6	1.47	.183	.359	.0015	.12	8.	4.65
1894-----	.5	38.3	21.8	16.4	1.87	.089	.461	.0001	.08	10.6	5.50

#### WATER SUPPLY OF THOMPSONVILLE, WAREHOUSE POINT AND SUFFIELD.

Population in 1896, 6,000. The works are owned by the Thompsonville Water Company and were built in 1885. In 1890 the works were extended to Warehouse Point and a small portion of Suffield. The estimated population supplied with water is 12,000. The average daily consumption is 500,000 gallons, equal to a daily consumption of 42 gallons per capita.

The source of supply is from springs, located north of the village of Thompsonville, and supply the distributing tank by gravity. The watershed is hilly and there is no contamination upon it. The distributing tank is 40 feet in diameter and 40 feet high. An average depth of 32 feet of water is maintained. Vegetable growths are abundant in the reservoir, but no bad odors are reported.

The total length of mains is 20 miles.



Chemical examinations were made of samples from Thompsonville during February and July, 1894, and the results of the analyses were published in the Seventeenth Annual Report, page 297.

The averages of the chemical analyses are given below :

	Color.	RESIDUE ON EVAPORATION.				NITROGEN OF				Hardness as $\text{CaCO}_3$ .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammo- nia, not fil- tered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
	.08	81.0	77.5	3.5	1.86	.013	.076	.0015	.69	49.5	.98

#### WATER SUPPLY OF TORRINGTON.

Population in 1896, 10,000. The works are owned by the Torrington Water Company and were begun in 1878. The franchise provides neither for control of rates nor purchase of works by the borough. Consumption unknown.

The source of supply is surface water from impounding reservoirs located upon a stream. Crystal Lake, a distributing reservoir, is located about 2 miles west of the town. The reservoir is formed by an earth dam 234 feet long and 20 feet high, with a masonry heartwall 8 feet wide at bottom and 3 feet wide at top. It has an area of 5.5 acres ; a capacity of 18,000,000 gallons ; average depth 10 feet, with about one acre of shallow flowage ; bottom sandy. The surface loam was removed.

Lake Hatcha Somee, a storage reservoir, was built in 1882 and is located 4.5 miles west of the borough. It has an area of 19 acres, a capacity of 53,000,000 gallons ; average depth 12 feet, with 2 acres shallow flowage ; bottom of loam. No surface loam was removed. The water flows by gravity to the distributing reservoir, which distributes by gravity. No vegetable growths or odors are reported. The drainage area is hilly and composed of meadow and pasture lands and a small portion of woodland.

Whist Pond, a storage reservoir, is located 5 miles northwest of the borough and was constructed in 1891. This reservoir was in part a natural pond, but a dam 9 feet high was erected at the mouth of the pond and the water was diverted from its natural

channel to an open trench 600 feet long, from which it is conveyed by pipes to the stream on which the other reservoirs are located. It has an area of 41 acres ; a capacity of 125,000,000 gallons ; average depth 18 feet, with 5 acres shallow flowage ; bottom muddy. No surface soil was removed and there are vegetable growths in the water. The drainage area, 0.2 of a square mile in area, is hilly and mostly pasture land. There are no houses upon this watershed.

The total length of mains is 21 miles.

#### WATER SUPPLY OF UNIONVILLE.

Population in 1896, 2,000. The works are owned by the Unionville Water Company and were built in 1893. The population supplied is about 1,000.

The source of supply is a storage and distributing reservoir, located 2.5 miles north of the village. The reservoir is filled by a small stream and springs and distributes by gravity. It has a capacity of 2,000,000 gallons ; an average depth of 6 feet with about one-half its area shallow flowage. The surface loam was removed and the bottom is of gravel. No contamination or bad odors are reported.

The total length of mains is 4 miles.

#### WATER SUPPLY OF WALLINGFORD.

Population in 1896, 6,800. The works are owned by the borough and were built in 1882. The population supplied is about 6,500. The average daily consumption of water is about 1,000,000 gallons, equal to a daily consumption of 153 gallons per capita.

The source of supply is from Lake Pistapague, a natural lake, by gravity. The lake is located about  $5\frac{1}{2}$  miles southeast of the borough and is 245 feet above the center of the borough and 325 feet above the manufacturing portion. It has an area of 160 acres ; average depth 20 feet, with only a small portion of shallow flowage ; bottom rocky. Water is taken 800 feet from the shore, at a depth of 11 feet. The drainage area is about 500 acres ; 200 acres is hilly woodland, 290 acres pasturage and 10 acres cultivated. An additional drainage area of .75 square miles can be diverted into the lake. Disagreeable odors have been reported, due to *Uroglena Volvox*.

In 1893 a pumping station was established on Muddy River at a point where the main from Lake Pistapague crosses the river. The surface water from Muddy River has not been used because of an injunction against the borough.

Total length of mains is 15 miles.

Chemical and microscopical examinations were made of samples from Wallingford during the year 1895 and the results of the analyses were published in the Eighteenth Annual Report, pages 211-12. The averages of the chemical analyses are given below :

	Color.	RESIDUE ON EVAPORATION.				NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammo- nia. not fil- tered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1895 -----	.1	72.3	60.1	12.2	2.66	.018	.120	.0009	.05	50.	2.14

#### WATER SUPPLY OF WATERBURY.

Population in 1896, 40,000. The works are owned by the city, and were begun in 1867. Additional reservoirs were built in 1880 and 1895. The estimated population supplied with water is 30,000. The average daily consumption is 4,000,000 gallons, equal to a daily consumption of 130 gallons per capita. The supply is surface water from brooks and streams.

*The East Mountain System* comprises a distributing reservoir and two storage reservoirs.

Reservoir No. 1, a distributing reservoir, is located 2.5 miles southeast of and 225 feet above the city. The dam is 25 feet high and 265 feet long. It has a capacity of 10,000,000 gallons : the surface loam was removed ; bottom of sandy clay.

Reservoir No. 2 is located one-fourth of a mile above Reservoir No. 1 on the same stream, and is 175 feet higher in elevation. The dam is 30 feet high and 360 feet long. It has a capacity of 100,000,000 gallons ; bottom sandy and no surface loam was removed. The water comes from springs and small streams and the watershed, about one square mile in area, is composed mostly of open pastures, with little woodland. It is free from house drainage.

Prospect Reservoir, a storage reservoir, was built in 1880 upon another stream and connected with Reservoir No. 2 by a pipeline 3,500 feet in length. It has a capacity of 70,000,000 gallons; bottom of rock and mud. The drainage area of .47 of a square mile is largely pasture land.

Cooke Street Reservoir, a distributing reservoir, is located one mile northeast of the city. It is a high service reservoir, which can be used for general distribution in case of accident to the other reservoirs or to the supply mains. The capacity of the reservoir is 8,000,000 gallons; the bottom is of gravel. The surface loam was removed. It receives water from a small stream supplied by springs, but is chiefly supplied by gravity from the East Mountain system or by pumping from Mad River in cases of emergency.

*Wigwam Reservoir*, a storage and distributing reservoir, is located 11.5 miles northwest of the city, on a large stream known as the West Branch of the Naugatuck River. It has an area of 60 acres; an average depth of 17 feet and about 10 acres shallow flowage. Its capacity is 335,000,000 gallons. The bottom is sandy and clay. The surface loam was removed.

The watershed, 18 square miles in area, is composed of hilly woodland, pastures and cultivated fields. The population on the watershed, from the topographical map of the State and the U. S. Census Report for 1890, is 720, equal to a population of 40 per square mile.

The water developed a fishy odor and taste in May and August, 1896.

The reservoir distributes by gravity.

The total length of mains is 40 miles.

Chemical, microscopical and bacteriological examinations were made of samples from the East Mountain system during the years 1889-90 and 1890-91, and the results of the analyses were published in the Fourteenth Annual Report, pages 295-300. Chemical and microscopical examinations were made of samples from Wigwam Reservoir during 1894 and 1895, and the results of the analyses were published in the Seventeenth Annual Report, pages 288-290, and in the Eighteenth Annual Report, pages 213-215.

Chemical and microscopical examinations were made of samples drawn from a tap in the city during the year 1896, and the results may be found elsewhere in this report.



The averages of the chemical examinations are given below.

	Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
East Mountain, 1889-90 ---	.03	29.2	20.8	8.4	2.08	.022	.161	.0005	.05	----	----
East Mountain, 1890-91 ---	.10	28.0	20.3	7.7	1.89	.031	.234	.0005	.04	6.	2.93
Wigwam, 1894	.20	31.8	29.5	8.6	1.89	.024	.134	.0006	.09	14.	3.44
" 1895	.30	38.3	24.7	13.6	1.86	.033	.162	.0006	.06	10.	4.15
City Tap, 1896	.50	42.8	26.3	16.5	1.95	.034	.161	.0020	.09	9.	4.51

### WATER SUPPLY OF WEST HAVEN.

Population in 1896, 5,000. The works are owned by the West Haven Water Company, and were built in 1883 by D. Goffe Phipps. About 3,500 persons are supplied.

The source of supply is Ivy Lake, an artificial reservoir, located one-third of a mile west of the borough. Consumption unknown. The reservoir, formed by impounding Cove River, has an area of 40 acres and a capacity of 150,000,000 gallons. The average depth of the reservoir is 12 feet, and only a small portion of the area is shallow flowage. The bottom is of rock and clay. The watershed has an area of 2,000 acres. The region is hilly, with woodland and cultivated fields. There are a few dwelling-houses on the watershed, and the population is about 56, equal to a population of 19 per square mile. At times the water is highly colored and supports abundant vegetable growths.

The total length of mains is 18 miles.

Chemical and microscopical examinations were made of samples from West Haven during the year 1895, and the results of the analyses were published in the Eighteenth Annual Report, pages 215-16. The averages of the chemical analyses are given below.

Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
.4	72.5	54.7	17.8	5.95	.038	.205	.0013	.14	34.	4.98



## WATER SUPPLY OF WILLIMANTIC.

Population in 1896, 10,000. The works were built by the borough in 1885. The number of services is about 950, and the daily average consumption is 500,000 gallons.

The source of supply is the Natchaug River. The water is pumped to a distributing reservoir from the pumping station, which is located on the Natchaug River, about 2 miles northeast of the city. At the pumping station there is a masonry dam of an average height of 14 feet above the river bed, over which the water usually flows. The drainage area of the Natchaug River, at the point from which the water is taken, is 161.8 square miles, as measured on the topographical map of Connecticut. The population on the watershed is about 6,655, equal to a population of 41 per square mile.

The region is mostly woodland, with many cultivated farms. There are a number of towns and villages upon the watershed, and most of them are directly on or near the various streams that feed the river. There are 2 thread mills, 2 and 4 miles respectively, and one paper mill, 7 miles above the intake.

The distributing reservoir has a capacity of 5,000,000 gallons. Average depth 5 feet; bottom muddy.

The total length of mains is about 20 miles.

Chemical, microscopical and bacteriological examinations were made of samples from Willimantic during the years 1889-90 and 90-91, and the results of the analyses were published in the Fourteenth Annual Report, pages 284-7.

The averages of the chemical analyses are given below.

	Color.	RESIDUE ON EVAPORATION.				NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
		Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.	Chlorine.	Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
1889-90 -----	.40	40.8	29.5	11.3	1.87	.018	.121	.0009	.07	-----	-----
1890-91 -----	.33	36.6	27.6	9.0	1.82	.026	.140	.0005	.06	11.	4.55

## WATER SUPPLY OF WINDSOR.

Population in 1896, 3,300. The works are owned by the Windsor Water Company, and were built in 1870. The town neither controls rates nor has the power to purchase works.

The source of supply formerly was from a small pond fed by springs and used as a factory reservoir. The supply is now obtained from springs situated at the base of a high ridge and about one and one-fourth miles west from, and 60 feet above, the town.

The population supplied is about 600. The estimated average daily consumption is 24,000 gallons, equal to a daily consumption of 40 gallons per capita. The supply is by gravity, and the only storage is in the brick wells, which have a storage capacity of 30,000 gallons, and are built around the springs. No pollution or bad odors are reported in the water. The supply was deficient in August of 1894 and 1895.

The total length of mains is 1.5 miles.

#### WATER SUPPLY OF WINDSOR LOCKS.

Population in 1896, 3,000. The works were built in 1889 by William E. Townsend & Co., and are now owned by the town. Water is supplied to about 2,000 of the inhabitants of the town. The average daily consumption is 100,000 gallons, equal to a daily average consumption of 50 gallons per capita.

The source of supply is a spring about 1.5 miles from the town and the water is pumped to a stand-pipe. The spring flows out of a heavily-wooded ravine in the midst of a sandy plain. It has a flowage of about 500 gallons per minute in summer and flows through woodland with no pastures or cultivated land near it. The watershed is largely hilly woodland. The stand-pipe is 110 feet high and 20 feet in diameter.

#### WATER SUPPLY OF WINSTED.

Population 1890, 4,846. The works were built by the borough in 1862. The consumption is unknown.

The source of supply was taken from Highland Lake, a natural lake, located .5 of a mile west and about 120 feet above the borough. Highland Lake is about 2.5 miles long and 1 mile wide, and is 489 acres in area. In 1894 a new source of supply was obtained from Mad River and Rugg Brook.

The water was diverted from Mad River by building a masonry dam and a canal. The dam is located about 3.5 miles northwest from and 280 feet above the borough. It is 168 feet long and 8 feet high. The bottom of the reservoir formed was cleared of brushwood and vegetable matter. A canal diverts the water

into Rugg Brook or Winsted Reservoir. It is 2,409 feet long, 8 feet wide at the bottom and 7 feet wide at the top, and has a fall of 4.7 feet.

Rugg Brook Reservoir is an artificial reservoir formed by three dams; a masonry dam 300 feet long and 25.2 feet high, two earthen dams 252 feet long, 20 feet high and 168 feet long, 14 feet high. The reservoir is 45 acres in area, available capacity about 133,000,000 gallons. The reservoir bottom was cleared of brush and vegetable matter.

The watershed of Mad River and Rugg Brook is 10.8 square miles in area and is composed of hilly woodland and pastures. The estimated population on the watershed is about 162, equal to a population of 15 per square mile. The borough has the right to divert two-thirds of the flow of Mad River and Rugg Brook. This water is carried by means of a tunnel to Crystal Lake Reservoir, the distributing reservoir. The tunnel is cut from solid rock through a mountain, is 3,590 feet long, 6 by 6 feet in height and width, and has a fall of about 10 feet.

Crystal Lake Reservoir is a natural lake raised 10 feet by a dam. It is 137 acres in area, available capacity 390,000,000 gallons. The dam is of masonry, 548 feet long and 10 feet high. The water is hence distributed by gravity and has a fall of about 250 feet. The overflow from Crystal Lake flows by gravity to Highland Lake.

Chemical and microscopical examinations were made of monthly samples during 1895, and the results were published in the Eighteenth Annual Report, pages 217-19. The averages of the chemical results are given below.

Color.	RESIDUE ON EVAPORATION.			Chlorine.	NITROGEN OF				Hardness as CaCO <sub>3</sub> .	Oxygen Consumed.
	Total at 100° C.	Non-Volatile, Mineral.	Volatile, Organic.		Free Ammo- nia, not filtered.	Albuminoid Ammonia, not filtered.	Nitrites.	Nitrates.		
.3	32.8	20.3	12.5	1.50	.017	.112	.0009	.07	6.	3.75

## DEPARTMENT OF PUBLIC HEALTH.

## STATE OF CONNECTICUT.

## STATE BOARD OF HEALTH.

	Term expires
Prof. WILLIAM H. BREWER, New Haven, President,	July 1st, 1897
RALPH S. GOODWIN, M.D., Thomaston, . . . .	July 1st, 1897
NATHANIEL E. WORDIN, M.D., Bridgeport, . . .	July 1st, 1899
GEORGE P. INGERSOLL, Attorney, New Haven, . .	July 1st, 1899
GROVE H. WILSON, M.D., Meriden, . . . .	July 1st, 1901
THEODORE H. MCKENZIE, Civil Engineer, Southington,	July 1st, 1901
Prof. C. A. LINDSLEY, M.D., Secretary and member (ex-officio), New Haven. Appointed by the Board.	

Office of Secretary, 15 Elm street, New Haven.

COUNTY AND TOWN HEALTH OFFICERS AND HEALTH  
OFFICIALS OF THE CITIES AND BOROUGHES  
OF CONNECTICUT.

[Arranged in alphabetical order by counties.]

Names and P. O. Address of the County Health Officers, and of the Town Health Officers arranged in alphabetical order by counties.

Also the Health Officers and Health Committees of the cities and boroughs-electd annually in accordance with their respective charters.

Place.	Name.	P. O. Address.
HARTFORD COUNTY.....	Daniel A. Markham	Hartford.
NEW HAVEN COUNTY ....	Carleton E. Hoadley	New Haven.
NEW LONDON COUNTY....	Chas. F. Thayer	Norwich.
FAIRFIELD COUNTY.....	Geo. E. Hill	Bridgeport.
WINDHAM COUNTY .....	Wm. A. King	Willimantic.
LITCHFIELD COUNTY.....	F. W. Etheridge	Thomaston.
MIDDLESEX COUNTY .....	Wesley U. Pearne	Middletown.
TOLLAND COUNTY .....	M. P. Yeomans	Andover.

## HARTFORD COUNTY.

Daniel A. Markham, Esq., County Health Officer, Hartford.

AVON .....	John L. North, M.D.....	Avon.
BERLIN .....	R. E. Ensign, M.D.....	Berlin.
BLOOMFIELD .....	O. K. Isham, M.D.....	Bloomfield.
BRISTOL .....	H. D. Brennan, M.D....	Bristol.
BURLINGTON .....	John Luby .....	Burlington.
CANTON .....	G. F. Lewis, M.D.....	Collinsville.
EAST GRANBY .....	Wm. C. Foster .....	East Granby.
EAST HARTFORD .....	E. H. Griswold, M.D....	East Hartford.
EAST WINDSOR.....	H. O. Allen, M.D.....	Broad Brook.
ENFIELD .....	G. T. Finch, M.D.....	Thompsonville.
FARMINGTON .....	S. J. Edgerton, M.D....	Unionville.
GLASTONBURY.....	C. G. Rankin, M.D.....	Glastonbury.
GRANBY .....	A. J. Weed, M.D.....	Granby.
HARTLAND .....	Clifford Cowdry .....	Hartland.
MANCHESTER .....	M. S. Bradley, M.D.....	So. Manchester.
MARLBOROUGH .....	J. A. Day.....	Marlborough.
NEW BRITAIN .....	W. P. Bunnell, M.D....	New Britain.
NEWINGTON .....	J. S. Kirkham, Esq. ....	Newington.
PLAINVILLE .....	J. N. Bull, M.D.....	Plainville.
ROCKY HILL .....	F. L. Burr, M.D.....	Rocky Hill.
SIMSBURY .....	C. M. Wooster, M.D....	Tariffville.
SOUTHINGTON.....	J. H. Osborne, M.D....	Southington.
SOUTH WINDSOR .....	C. L. Blakeslee, M.D....	E. Windsor Hill.
SUFFIELD.....	J. K. Mason, M.D.....	Suffield.
WEST HARTFORD.....	F. H. Stadtmueller ....	Elmwood.
WETHERSFIELD .....	E. G. Fox, M.D.....	Wethersfield.
WINDSOR.....	N. S. Bell, M.D.....	Windsor.
WINDSOR LOCKS.....	J. A. Coogan, M.D.....	Windsor Locks.

## CITY HEALTH OFFICERS.

HARTFORD .....	<i>President</i> .....	Jas. Campbell, M.D.
	<i>Clerk and Registrar of Vital Statistics</i> ..	J. B. Hall, M.D.
NEW BRITAIN .....	<i>Health Officer</i> .....	W. Dontteil, M.D.

## BOROUGH HEALTH OFFICERS.

BRISTOL .....	H. D. Brennan, M.D.	
SOUTHINGTON .....	G. L. Messenger, } S. D. Neal, } W. A. Finch, }	<i>Health Committee.</i>



## NEW HAVEN COUNTY.

Carleton E. Hoadley, Esq., County Health Officer, New Haven.

NEW HAVEN	F. W. Wright, M.D.	New Haven.
BEACON FALLS	H. D. Bronson	Beacon Falls.
BETHANY	S. G. Davidson	Bethany.
BRANFORD	W. H. Zink, M.D.	Branford.
CHESHIRE	M. N. Chamberlin, M.D.	Cheshire.
EAST HAVEN	J. A. Hutchinson, M.D.	East Haven.
GUILFORD	G. P. Reynolds, M.D.	Guilford.
HAMDEN	G. H. Joslin, M.D.	Hamden.
MADISON	A. D. Ayer, M.D.	Madison.
MERIDEN	G. H. Wilson, M.D.	Meriden.
MIDDLEBURY	G. F. Abbott, M.D.	Middlebury.
MILFORD	E. B. Heady, M.D.	Milford.
NAUGATUCK	G. M. Crampton	Naugatuck.
NORTH BRANFORD	C. W. Gaylord, M.D.	Branford.
NORTH HAVEN	R. B. Goodyear, M.D.	North Haven.
ORANGE	J. F. Barnett, M.D.	West Haven.
OXFORD	L. Barnes, M.D.	Oxford.
PROSPECT	J. R. Platt	Prospect.
SEYMOUR	F. A. Benedict, M.D.	Seymour.
SOUTHBURY	J. M. Shepherd, M.D.	South Britain.
WALLINGFORD	W. P. Wilson, M.D.	Wallingford.
WATERBURY	B. A. O'Hara, M.D.	Waterbury.
WOLCOTT	J. H. Garrigus	Waterbury.
WOODBIDGE	J. W. Barker, M.D.	Westville.

## CITY HEALTH OFFICERS.

ANSONIA	R. J. Barry, M.D.
DERBY	C. T. Baldwin, M.D.
MERIDEN	G. H. Wilson, M.D.
NEW HAVEN	F. W. Wright, M.D.
WATERBURY	E. W. McDonald, M.D.

## BOROUGH HEALTH OFFICERS.

BRANFORD	W. H. Zink, M.D.
GUILFORD	G. P. Reynolds, M.D.
WEST HAVEN	J. F. Barnett, M.D.

## NEW LONDON COUNTY.

Charles F. Thayer, Esq., County Health Officer, Norwich.

BOZRAH .....	N. Johnson, M.D.....	Bozrah.
COLCHESTER .....	M. W. Robinson, M.D....	Colchester.
EAST LYME .....	F. H. Dart, M.D.....	Niantic.
FRANKLIN .....	E. L. Danielson, M.D....	Lebanon.
GRISWOLD.....	G. H. Jennings, M.D....	Jewett City.
GROTON .....	J. Gray, M.D.....	Mystic River.
LEBANON .....	E. L. Danielson, M.D....	Lebanon.
LEDYARD.....	Edwin W. Case, M.D....	Ledyard.
LISBON .....	H. Lyon.....	Lisbon.
LYME .....	J. G. Ely, M.D.....	Hamburgh.
MONTVILLE .....	W. M. Burchard, M.D....	Uncasville.
NORTH STONINGTON.....	E. H. Knowles, M.D....	No. Stonington.
NORWICH .....	E. H. Linnell, M.D....	Norwich.
OLD LYME .....	W. H. H. Wallace, M.D....	Old Lyme.
PRESTON .....	O. F. Harris, M.D.....	Norwich.
SALEM .....	C. F. Congdon, M.D....	Salem.
SPRAGUE .....	T. I. Stanton, M.D....	Baltic.
STONINGTON .....	O. M. Barber, M.D....	Mystic.
VOLUNTOWN .....	W. R. Davis, M.D.....	Voluntown.
WATERFORD .....	G. M. Minor, M.D.....	Waterford.

## CITY HEALTH OFFICERS.

NEW LONDON.....	<i>Chairman Health Com.</i> .....	E. N. Crocker.
NORWICH .....	.....	C. E. Stark, M.D.

## BOROUGH HEALTH OFFICERS.

COLCHESTER.....	M. W. Robinson, M.D.
STONINGTON .....	W. F. Broughton.
	C. O. Main, M.D.

## FAIRFIELD COUNTY.

Geo. E. Hill, Esq., County Health Officer, Bridgeport.

DANBURY .....	G. E. Lemmer, M.D.....	Danbury.
BETHEL .....	A. E. Barber, M.D.....	Bethel.
BROOKFIELD .....	J. F. Smith, M.D.....	Brookfield.
DARIEN .....	W. F. French, M.D.....	Noroton.
EASTON .....	B. W. White, M.D.....	Bridgeport.
FAIRFIELD .....	W. H. Donaldson, M.D.....	Fairfield.
GREENWICH .....	L. P. Jones, M.D.....	Greenwich.
HUNTINGTON .....	W. S. Randall, M.D.....	Birmingham.
MONROE .....	J. G. Stevens, M.D.....	Monroe.
NEW CANAAN .....	C. B. Keeler, M.D.....	New Canaan.
NEW FAIRFIELD.....	W. S. Watson, M.D.....	Danbury.
NEWTOWN.....	E. M. Smith, M.D.....	Newtown.
NORWALK .....	W. J. Tracey, M.D.....	Norwalk.
REDDING .....	E. H. Smith, M.D.....	Redding.
RIDGEFIELD .....	W. E. Weed, M.D.....	Ridgefield.
SHERMAN.....	J. N. Woodruff, M.D.....	Sherman.
STAMFORD.....	F. J. Rogers, M.D.....	Stamford.
STRATFORD .....	G. F. Lewis, M.D.....	Stratford.
TRUMBULL .....	B. W. White, M.D.....	Bridgeport.
WESTON .....	F. Gorham, M.D.....	Lyon's Plain.
WESTPORT .....	L. T. Day, M.D.....	Westport.
WILTON .....	A. B. Gorham, M.D.....	Wilton.

## CITY HEALTH OFFICERS.

BRIDGEPORT.....	G. S. Heft, M.D.
DANBURY .....	Wm. Humphries.
NORWALK .....	W. J. Tracey, M.D.
SOUTH NORWALK .....	J. M. Coburn, M.D.
STAMFORD .....	J. F. Rowell, M.D.

## BOROUGH HEALTH OFFICERS.

BETHEL .....	A. E. Barber, M.D.
GREENWICH .....	L. P. Jones, M.D.
NEW CANAAN.....	C. B. Keeler, M.D.
SHELTON .....	G. A. Shelton, M.D.

## WINDHAM COUNTY.

William A. King, Esq., County Health Officer, Willimantic.

BROOKLYN .....	A. H. Tanner, M.D.....	Brooklyn.
ASHFORD .....	F. B. Converse, M.D.....	Westford.
CANTERBURY .....	J. O. Smith, M.D.....	So. Canterbury.
CHAPLIN .....	F. C. Lummis .....	Chaplin.
EASTFORD .....	E. K. Robbins, M.D. ....	Eastford.
HAMPTON .....	H. Jackson.....	Hampton.
KILLINGLY .....	A. E. Darling, M.D.....	Killingly.
PLAINFIELD .....	W. W. Adams, M.D.....	Moosup.
POMFRET .....	Chas. O. Thompson ....	Pomfret.
PUTNAM .....	J. J. Russell, M.D.....	Putnam.
SCOTLAND .....	D. L. Ross, M.D.....	Scotland.
STERLING .....	O. W. Bates .....	Oneco.
THOMPSON .....	L. Holbrook, M.D.....	Thompson.
WINDHAM .....	F. E. Wilcox, M.D. ....	Willimantic.
WOODSTOCK .....	Jos. Spalding, M.D.....	Woodstock.

## CITY HEALTH OFFICER.

WILLIMANTIC .....

F. E. Wilcox, M.D.

## BOROUGH HEALTH OFFICER.

DANIELSON.....

W. H. Judson, M.D.

## LITCHFIELD COUNTY.

F. W. Etheridge, Esq., County Health Officer, Thomaston.

LITCHFIELD .....	Chas. I. Page, M.D.....	Litchfield.
BARKHAMSTED .....	H. D. Moore, M.D.....	Riverton.
BETHLEHEM .....	L. P. Judd .....	Bethlehem.
BRIDGEWATER .....	B. E. Bostwick, M.D. ....	Bridgewater.
CANAAN .....	F. S. Skiff, M.D.....	Falls Village.
COLEBROOK .....	H. L. Culver .....	Colebrook.
CORNWALL .....	G. H. Beers .....	Cornwall Bridge.
GOSHEN .....	J. H. North, M.D.....	Goshen.
HARWINTON .....	C. L. Blake, M.D.....	Harwinton.
KENT .....	J. F. Gibbs .....	Kent.
MORRIS .....	S. E. Stockman .....	East Morris.
NEW HARTFORD .....	Jerry Burwell, M.D. ....	New Hartford.
NEW MILFORD .....	J. C. Barker, M.D.....	New Milford.
NORFOLK .....	J. C. Kendall, M.D.....	Norfolk.
NORTH CANAAN .....	C. W. Camp, M.D.....	Canaan.
PLYMOUTH .....	M. P. Robinson, M.D....	Terryville.
ROXBURY .....	L. J. Pons, M.D.....	Roxbury.
SALISBURY .....	W. B. Bissell, M.D.....	Lakeville.
SHARON .....	.....	.....
THOMASTON .....	Theo. St. John, M.D. ....	Thomaston.
TORRINGTON .....	E. Pratt, M.D.....	Torrington.
WARREN .....	Wm. Forestelle, Jr. ....	Warren.
WASHINGTON .....	Robt. Marcy, M.D.....	New Preston.
WATERTOWN .....	W. S. Munger, M.D.....	Watertown.
WINCHESTER .....	S. C. Wheeler, M.D.....	West Winsted.
WOODBURY .....	E. L. Smith, M.D. ....	Hotchkissville.

## BOROUGH HEALTH OFFICERS.

LITCHFIELD .....	Chas. I. Page, M.D. ....
TORRINGTON .....	Elias Pratt, M.D.....
WINSTED .....	S. C. Wheeler, M.D.....



## MIDDLESEX COUNTY.

Wesley U. Pearne, Esq., County Health Officer, Middletown.

MIDDLETOWN .....	Frank E. Coudert, M.D.	Middletown.
CHATHAM .....	E. S. Parmelee, M.D.	Cobalt.
CHESTER .....	S. W. Turner, M.D.	Chester.
CLINTON .....	H. S. Reynolds, M.D.	Clinton.
CROMWELL .....	Chas. E. Bush, M.D.	Cromwell.
DURHAM .....	E. A. Markham, M.D.	Durham.
EAST HADDAM .....	M. W. Plumstead, M.D.	Moodus.
ESSEX .....	C. H. Hubbard, M.D.	Essex.
HADDAM .....		
KILLINGWORTH .....	E. P. Nichols, M.D.	Killingworth.
MIDDLEFIELD .....	J. E. Bailey, M.D.	Middletown.
OLD SAYBROOK .....	J. H. Grannis, M.D.	Saybrook.
PORTLAND .....	F. E. Potter, M.D.	Portland.
SAYBROOK .....	E. Bidwell, M.D.	Deep River.
WESTBROOK .....	T. B. Bloomfield, M.D.	Westbrook.

## CITY HEALTH OFFICER.

MIDDLETOWN ..... J. Francis Calef, M.D.

## TOLLAND COUNTY.

M. P. Yeomans, Esq., County Health Officer, Andover.

TOLLAND .....	E. S. Agard .....	Tolland.
ANDOVER .....	E. H. Cook .....	Andover.
BOLTON .....	C. F. Sumner, M.D.	Bolton.
COLUMBIA .....	W. H. Yeomans .....	Columbia.
COVENTRY .....	W. L. Higgins, M.D.	South Coventry.
ELLINGTON .....	E. T. Davis, M.D.	Ellington.
HEBRON .....	C. H. Pendleton, M.D.	Hebron.
MANSFIELD .....	E. G. Sumner, M.D.	Mansfield Center.
SOMERS .....	A. L. Hurd, M.D.	Somers.
STAFFORD .....	F. L. Smith, M.D.	Stafford Springs.
UNION .....	E. W. Upham .....	Union.
VERNON .....	A. R. Goodrich, M.D.	Vernon.
WILLINGTON .....	C. C. Essex .....	Willington.

## CITY HEALTH OFFICER.

ROCKVILLE ..... T. F. Rockwell, M.D.

## BOROUGH HEALTH OFFICER.

STAFFORD SPRINGS ..... F. L. Smith, M.D.

## EXAMINING COMMITTEES OF THE STATE MEDICAL SOCIETIES.

### COMMITTEE OF THE CONNECTICUT MEDICAL SOCIETY.

Name.	Address.	Term expires.
Dr. H. S. FULLER .....	Hartford.....	1897
Dr. MAX MAILHOUSE.....	New Haven.....	1898
Dr. L. B. ALMY .....	Norwich.....	1899
Dr. J. F. CALEF .....	Middletown.....	1900
Dr. J. W. WRIGHT .....	Bridgeport.....	1901

### COMMITTEE OF THE CONNECTICUT HOMEOPATHIC MEDICAL SOCIETY.

Name.	Address.	Term expires.
Dr. C. B. ADAMS .....	New Haven.....	1897
Dr. E. B. HOOKER.....	Hartford.....	1898
Dr. EMILY PARDEE .....	So. Norwalk .....	1899
Dr. E. H. LINNELL .....	Norwich.....	1900
Dr. HARLAN P. COLE.....	Hartford.....	1901

### COMMITTEE OF THE CONNECTICUT ECLECTIC MEDICAL ASSOCIATION.

Name.	Address.	Term expires.
Dr. J. D. S. SMITH .....	Bridgeport.....	1897
Dr. THOS. S. HODGE .....	Torrington.....	1898
Dr. LEONARD BAILEY .....	Middletown.....	1899
Dr. H. H. CONVERSE.....	Eastford .....	1900
Dr. GEO. A. FABER.....	Waterbury.....	1901

# ALPHABETICAL LIST

(Continued from last Report)

## OF THE MEDICAL PRACTITIONERS IN CONNECTICUT WHO HAVE COMPLIED WITH THE LAW PASSED BY THE GENERAL ASSEMBLY OF 1893, RELATING TO THE REGISTRATION OF PHYSICIANS, SURGEONS AND MIDWIVES.

The following is a full list of all who have registered between the 1st day of October, 1895 and October 1st, 1896.

When no post office address is given, it is understood to be at the place where registered.

Names.	Where Registered.	P. O. Address.
Abbott, Larmon W., M.D.....	Bridgeport.	
Allen, Millard F., M.D.....	Greenwich	Philadelphia, Pa.
Allen, S. Busby, M.D.....	Greenwich	New York City.
Bainbridge, Wm. S., M.D.....	Greenwich	New York City.
Balcom, Lafayette, M.D.....	Greenwich	New York City.
Ballance, Wm. P., M.D.....	Greenwich	Paterson, N. J.
Bankowsky, Adolph A. R., M.D.	Greenwich.	
Barnes, Frank H., M.D.....	Stamford.	
Bartlett, Chas. J., M.D.....	New Haven.	
Bartlett, Chas W., M.D.....	Hartland	Granville, Mass.
Beard, Theodore E., Jr., M.D...	New Haven.	
Beebe, George H., M.D.....	Salisbury.	
Belden, George W., M.D.....	Hartford.	
Bergman, Axel Per, M.D.....	Orange.	
Bishop, Frederick C., M.D.....	Bridgeport.	
Bleything, George D., M.D....	Greenwich	New York City.
Boardman, Walter, M.D.....	Greenwich	Lancaster, Pa.
Bond, Hunter A., M.D.....	Stamford.	
Bowlsby, Wm. H., M.D.....	Greenwich	Brooklyn, N. Y.
Boyer, Arthur I., M.D.....	New Haven.	
Brown, Adolph G., M.D.....	Greenwich	New York City.
Brundage, Albert H., M.D....	Greenwich	Brooklyn, N. Y.
Burke, Wm., M.D.....	Greenwich	
Burnett, Peter V., M.D.....	Greenwich	Brooklyn, N. Y.
Burroughs, Joseph B., M.D....	Bridgeport.	
Butler, William J., M.D.....	Hartford.	
Button, Lucius L., M.D.....	Norwich.	
Caldwell, Geo. P., M.D.....	New Haven.	
Calkins, Cheney H., M.D.....	Enfield	Springfield, Mass.

Names.	Where Registered.	P. O. Address.
Calkins, Marshall, M.D.	Enfield	Springfield, Mass.
Cameron, Ella V., M.D.	Greenwich	New York City.
Cameron, John L., M.D.	Hartford.	
Carbon, Philip P., M.D.	Greenwich	New York City.
Carradine, James S., M.D.	Greenwich	New York City.
Caton, Wm. P., M.D.	New Britain.	
Chester, Thomas W., M.D.	Hartford.	
Christian, Wm. W., M.D.	Greenwich	New York City.
Cleaver, James P., M.D.	Wallingford.	
Cochran, Levi B., M.D.	Hartford.	
Colby, Wallace W., M.D.	Greenwich	Brooklyn, N. Y.
Cowan, Isabella, M.D.	Waterbury.	
Cramm, Wm. E., M.D.	Greenwich	Philadelphia, Pa.
Cronk, Harvey R., M.D.	Greenwich	New York City.
Crowe, Willis H., M.D.	Norwalk	South Norwalk.
Curtis, C. Frederick, M.D.	Thompson	W. Harpswell, Me.
De Castro, Joseph F., M.D.	Greenwich	Brooklyn, N. Y.
Defendorf, Allan R., M.D.	New Haven.	
Deschatelets, Jos. P. P., M.D.	Plainfield	Moosup.
Disney, F. A. E., M.D.	Litchfield.	
Dittrich, Eberhard W., M.D.	Greenwich	New York City.
Donohue, James J., M.D.	Norwich.	
Dougherty, Edwin N., M.D.	Waterbury.	
Edwards, Philip H., M.D.	Andover.	
Elliott, James P., M.D.	Thompson	Boston, Mass.
Ellis, Thos. L., M.D.	New Haven.	
Evans, Geo. E., M.D.	New Haven.	
Finch, Edward B., M.D.	Greenwich	Bellev. Hosp., N. Y.
Fisher, John L., M.D.	Greenwich	New Castle, Del.
Fisher, Richard C., M.D.	Greenwich	Chicago, Ill.
Fleming, Edward M., M.D.	Greenwich	New York City.
Flick, Harry W., M.D.	Greenwich	Philadelphia, Pa.
Foskett, Eben, M.D.	Greenwich	New York City.
Garmon, John O., M.D.	Thompson	Boston, Mass.
Geyser, Albert C., M.D.	Greenwich	New York City.
Gifford, Benj. D., M.D.	Thompson	Boston, Mass.
Gilbert, John D., Jr., M.D.	Stratford.	
Gilhuly, John J., M.D.	Bridgeport.	
Gompertz, Louis M., M.D.	New Haven.	
Goodwin, Chas. S., M.D.	Waterbury.	
Goodwin, Wm. M., M.D.	Waterbury.	
Gordon, Wm. F., M.D.	Danbury.	
Gorham, Luella K., M.D.	Norwalk.	
Gray, Thomas N., M.D.	Bridgeport.	
Greene, John P., M.D.	Greenwich.	
Griffin, Lester B., M.D.	Danbury.	
Griswold, Richard S., M.D.	Lyme.	
Hackley, Chas. E., M.D.	Greenwich	New York City.

Names.	Where Registered.	P. O. Address.
Handy, Harrie D., M.D.	Thompson	Dudley, Mass.
Hartung, Harry H., M.D.	New Haven.	
Haskell, Nelson D., M.D.	Greenwich	New York City.
Hayes, Frederick L., M.D.	Enfield	Somersworth, N. H.
Hayunga, Bernard H., M.D.	Greenwich	New York City.
Heller, Isaac M., M.D.	New Haven.	
Herzog, Alfred W., M.D.	Greenwich	Hoboken, N. J.
Higgins, Harry E., M.D.	Norwich.	
Hills, Laura H., M.D.	Willimantic.	
Hoag, Arthur F., M.D.	Salisbury	Millerton, N. Y.
Holbrook, Chas. W., M.D.	East Haven.	
Holmes Frank W., M.D.	Greenwich.	
Holt, Channing A., M.D.	Salisbury	Lockport, N. Y.
Horr, Edward F., M.D.	Bridgeport.	
Hotchkiss, Wm. H., M.D.	New Haven.	
House, Albert L., M.D.	Milford.	
Irwin, Vincent J., M.D.	Enfield	Springfield, Mass.
Jackson, Chas. R., M.D.	Greenwich	New York City.
Jackson, Chas. W., M.D.	Greenwich	New York City.
Jerauld, Frederick N. C., M.D.	Greenwich	New York City.
Jones, Milo H., M.D.	Greenwich.	
Kan, Anton, M.D.	Greenwich	New York City.
Karrmann, Edw. W., M.D.	Bridgeport.	
Kellogg, Arthur B., M.D.	Greenwich	Bellev. Hosp., N. Y.
Kellogg, Clifford W., M.D.	New Haven.	
Kelly, John L., M.D.	New Britain.	
Kenerson, Vertner, M.D.	New Haven.	
Kennedy, Paul B., M.D.	Derby.	
Kilmartin, Thomas J., M.D.	Waterbury.	
Kirk, Lucy A., M.D.	Thompson	Dorchester, Mass.
Knox, Hattie L., M.D.	Greenwich	Brooklyn, N. Y.
Korn, Abraham, M.D.	Greenwich	New York City.
Krausi, Wm. J., M.D.	Greenwich	New York City.
Laponta, A. M. Suffi, M.D.	Bridgeport.	
Leighton, Alton W., M.D.	New Haven.	
Lenox, Calvin S., M.D.	Colebrook	No. Adams, Mass.
Lombard, Guy D., M.D.	Greenwich	New York City.
Lord, Helen A., M.D.	Suffield	No'thampton, Mass.
Luria, Adolfo, M.D.	Salisbury	Chicago, Ill.
Luther, Celista E., M.D.	Clinton.	
Macpherson, Fred. Wm., M.D.	Enfield	Springfield, Mass.
Macy, Henry C., M.D.	Greenwich	New York City.
Maher, James S., M.D.	New Haven.	
Maloney, Daniel J., M.D.	Waterbury.	
Maloney, Edward R., M.D.	Norwich.	
Massinger, Ormay L., M.D.	Greenwich	Sea Isle City, N. J.
Matossian, Yacob M. H., M.D.	Greenwich	New York City.
Maurer, George E., M.D.	Greenwich	New York City.



Names.	Where Registered.	P. O. Address.
Maynard, Louis A., M.D.	Hartford.	
McCook, John B., M.D.	Hartford.	
McGuire, Michael F., M.D.	Salisbury	Burlington, Vt.
McLean, Thomas N., M.D.	Greenwich	Elizabeth, N. J.
McNamara, Andrew J., M.D.	Bridgeport.	
McNeil, Archibald, M.D.	New Haven.	
Mead, Frederick A., M.D.	Enfield	Willimantic, Mass.
Millsbaugh, Daniel T., M.D.	Greenwich	Paterson, N. J.
Monaghan, Eugene, M.D.	Greenwich	New York City.
Morgan, John W., M.D.	Greenwich	Washington, D. C.
Moriarty, James L., M.D.	Norwich.	
Morse, Fred J., M.D.	Suffield	Royalton, Vt.
Moulton, Edw. S., M.D.	New Haven.	
Mountain, John H., M.D.	Westport.	
Mulville, Frederick L., M.D.	Stamford.	
Munson, Leonard W., M.D.	Greenwich	Washington, D. C.
Muren, George M., M.D.	Greenwich	Brooklyn, N. Y.
Myers, George E., M.D.	Killingly.	
Nadle, Isidor, M.D.	Greenwich	New York City.
Nellis, Irving O., M.D.	Greenwich	Herkimer, N. J.
Newman, Arthur, M.D.	Greenwich.	
Noble, Anngenetete F., M.D.	Suffield	Westfield, Mass.
North, John L., M.D.	Avon.	
Norwood, Paul E., M.D.	Ansonia.	
O'Loughlin, Thos. F., M.D.	Willimantic.	
Paige, Harris L., M.D.	Greenwich	Philadelphia, Pa.
Perdue, Robert E., M.D.	Southport.	
Phelps, Chas. D., M.D.	New Haven.	
Porter, George E., M.D.	Salisbury	Lyons, N. Y.
Powell, Stephen C., M.D.	N. Stonington	Newport, R. I.
Radley, Jay H., M.D.	Greenwich	New York City.
Reardon, Thomas F., M.D.	Enfield.	
Rittenhouse, G. Johnson, M.D.	Greenwich	New York City.
Roberts, George, M.D.	Hartford.	
Root, Stella Q., M.D.	Stamford.	
Russegue, Henry E., M.D.	Hartford.	
Ryan, Wm. J., M.D.	Thompson	Worcester, Mass.
Sanford, Frank B., M.D.	Salisbury	Morley, N. Y.
Schermerhorn, Grace C., M.D.	Greenwich	Philadelphia, Pa.
Scudder, Heyward, M.D.	Greenwich	New York City.
Seabrooke, Alice M., M.D.	Greenwich	Philadelphia, Pa.
Seaver, Jay W., M.D.	New Haven.	
Shaffer, Alonzo, M.D.	Essex.	
Shahbazian, Abraham S., M.D.	Greenwich	New York City.
Sheahan, Michael J., M.D.	New Haven.	
Sheehan, Wm. J., M.D.	West Haven.	
Sheridan, Joseph P., M.D.	Greenwich	New York City.
Shirk, Sam'l M., M.D.	Stamford.	

Names.	Where Registered.	P. O. Address.
Sloninsky, Joseph T., M.D.	Greenwich	Philadelphia, Pa.
Smith, Charles, M.D.	Greenwich	New York City.
Smith, Egbert L., M.D.	Woodbury	Hotchkissville.
Smith, Howard F., M.D.	Hartford.	
Smith, James W., M.D.	Stamford.	
Smith, Walter A., M.D.	Enfield	Springfield, Mass.
Stanton, Thos. F., M.D.	Hartford.	
Stewart, James A., M.D.	Greenwich	Brooklyn, N. Y.
Stevens, Henry B., M.D.	Norwich.	
Stevens, Oscar H., M.D.	Thompson	Somerville, Mass.
Stölzel, Ida P.	Vernon	Rockville.
Strong, Charles D., M.D.	Westbrook.	
Swift, George P., M.D.	Greenwich	Lambertville, N. J.
Szathmari, Mary	Bridgeport.	
Taylor, Albert J., M.D.	Norwich	Taftville.
Thomes, John B., M. D.	Thompson	C'mb'r'l'd Cent., Me.
Thompson, Emma J., M.D.	East Haddam.	
Thompson, Hugh C., M.D.	New Haven.	
Thompson, Lloyd O., M.D.	Greenwich	Brooklyn, N. Y.
Tiffany, Frank M., M.D.	Stamford.	
Toms, Albert A., M.D.	Stamford	New York City.
Townsend, Charles R., M.D.	Salisbury	Albany, N. Y.
Tracy, Harriet E., M.D.	Greenwich	Bayonne, N. J.
Treadway, Wm. A. B., M.D.	Stamford.	
Trecartin, David M., M.D.	Bridgeport.	
Underwood, Adelaide M., M.D.	Greenwich	Lancaster, Pa.
Van Marter, James G., Jr., M.D.	Derby.	
Van Sickle, Albert M., M.D.	Greenwich	New York City.
Vermilye, Oscar E., M.D.	Greenwich	New York City.
Von Reis, Wm., M.D.	Hartford.	
Wadhams, Sanford, M.D.	Norwich.	
Wait, Sheridan P., M.D.	Salisbury	Fort Edward, N. Y.
Waldron, Wm. F., M.D.	Hartford.	
Warner, Chas. N., M.D.	Salisbury	Sheffield, Mass.
Waterbury, Fred'k S., M.D.	New Haven.	
Westerfield, Wm., M.D.	Greenwich	New York City.
Wheeler, Frank H., M.D.	New Haven.	
White, Fred. A., M.D.	Greenwich	Paterson, N. J.
Whiting, James R., Jr., M.D.	Stamford.	
Wilson, Wm. H., M.D.	Middletown.	
Wood, Luther H., M.D.	Orange	West Haven.
Woodhull, Edward D., M.D.	Ridgefield.	Monroe, N. Y.
Woods, James U., M.D.	Suffield	Holyoke, Mass.
Wright, James E., M.D.	Greenwich	New York City.
Young, Thomas H., M.D.	New Haven.	
Zacharie, Chas. C., M.D.	Greenwich	New York City.
Zborowski, Ladislaus, M.D.	Bridgeport.	

REPORT OF THE DENTAL COMMISSIONERS OF  
CONNECTICUT.OFFICE OF THE RECORDER. }  
HARTFORD, DECEMBER 15, 1896. }*To the Honorable State Board of Health:*

GENTLEMEN:—In compliance with Chapter CXXX of the Acts of the General Assembly of 1893, I have the honor to present for your kind consideration the third annual report of the Dental Commissioners of Connecticut, from December 31st, 1895, to December 15th, 1896.

Very respectfully,  
GEO. L. PARMELE, M.D., D.M.D.,  
*Dental Commissioner and Recorder.*

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## DENTAL COMMISSIONERS OF CONNECTICUT.

Appointed by his Excellency O. Vincent Coffin, Governor of Connecticut, July 1st, 1895, to hold office for two years.

Civilion Fones, D.D.S., of Bridgeport.  
Dr. William J. Rider, of Danbury.  
Richard W. Browne, D.D.S., of New London.  
Dr. Charles P. Graham, of Middletown.  
Geo. L. Parmele, M.D., D.M.D., of Hartford.

The Commission organized by electing Civilion Fones president, and Geo. L. Parmele recorder.

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## REPORT.

*To the Honorable State Board of Health:*

GENTLEMEN:—In accordance with the provisions of the law "Concerning the Practice of Dentistry" in this State, I beg leave to report, for the Dental Commissioners, their acts since my last report, dated December 31st, 1895.

The Commissioners met for the first time May 18th, 1896, in the Supreme Court rooms in the Capitol at Hartford. The full board, consisting of Commissioners Fones, Graham, Rider, Browne and Parmele were present, and the greater part of two days was consumed in attending to the various matters brought before them. The following persons, holding diplomas from colleges recognized by the National Association of Dental Examiners, were upon examination approved and granted licenses :

Walter S. Smith, D.D.S., N. Y. Coll., '94. Mystic.  
 Joseph D. Alvord, D.D.S., N. Y. Coll., '95. 370 Columbus ave., N. Y. City.  
 Joseph L. Egan, D.D.S., Columbian U. D. C., '96. Naugatuck.  
 Geo. L. Fenn, D.D.S., U. of Penn., '90. Springfield, Mass.  
 W. E. Darling, D.D.S., Pa. Coll. D. S., '96. Norwich.  
 Thos. A. Hart, D.D.S., Pa. Coll., D. S., '96. Danbury.  
 W. J. Hewes, D.D.S., N. Y. Coll., '75. Stamford.  
 Vernon Hiscox, D.D.S., U. of Md., D. Dept., '96. Middletown.  
 Antonio S. LaRue, D.D.S., U. of Md., D. Dept., '96. Putnam.  
 W. A. Knapp, D.D.S., Phil. D. C., '96. Waterbury.  
 Robert S. Peabody, D.D.S., Balt. D. C., '96. New Haven.  
 Ira B. Stilson, D.D.S., U. Penn. D. Dept., '95. Stamford.  
 Ellen R. Carr, D.D.S., Phil. D. Coll., '96. Hartford.  
 Henry J. Pillion, D.D.S., N. Y. D. Coll., '96. Hartford.  
 Burton Talmage, D.D.S., N. Y. D. Coll., '96. New Haven.  
 Louis H. Abel, D.D.S., N. Y. Coll., '96. 41 W. 12th St., N. Y. City.  
 Deering J. Fisher, D.D.S., Phil. D. Coll., '92. Voluntown.  
 Frank G. Baldwin, D.D.S., Phil. D. Coll., '96. Ansonia.

Duplicate certificates of Registration were issued to W. H. Ehni, of New Haven, and to George W. Allen, of Rockville, the Commission being satisfied that their original certificates had been accidentally destroyed.

The examination of candidates for license who were not graduates from recognized colleges, lasted from noon until eight o'clock in the evening, when the board adjourned to meet the following day to vote upon the candidates. Examinations in operative and in prosthetic dentistry were oral, while in anatomy, physiology, chemistry, histology, pathology and in dental and oral medicine and surgery the answers were written. At the next day's session it was voted to keep the present organization of the board, viz.: President, Civilion Fones; recorder, George L. Parmele.

Upon vote being taken, the following candidates, having a percentage of 70 or over, were granted licenses :

Henry Fischer, Brooklyn, N. Y.  
 J. J. Smith, M.D., Willimantic.  
 C. W. Lee, Jr., New Britain.  
 S. A. Little, Columbia.  
 B. R. Shopp, Hotchkissville.  
 G. A. McNeille, New York.  
 D. H. Dickerman, Springfield, Mass.

At a meeting held in Hartford, December 11th, the full commission were present. With a view towards ascertaining more fully the manipulative and practical ability of candidates, in addition to their theoretical knowledge, brought out in examinations, a committee was appointed to devise some plan by which this object can be attained and perfect the same in time for the next examination. In the case of Geo. F. Prentis of New London, who is believed to have been in practice at the time of the passage of the law, a temporary permit was issued until the next meeting, when he is to present sworn proof to that effect. Louis J. Sylvester of Manchester, upon conclusive proof, was granted a "legal right."

The Recorder attended, as representative from Connecticut, a four days' session of the National Association of Dental Examiners at Saratoga, where in conjunction with the National Association of Dental Faculties, much valuable work tending to elevate the standard of dental education was accomplished.

Respectfully submitted,  
 GEORGE L. PARMELE, M.D., D.M.D.,  
*Recorder, Dental Commissioners of Connecticut.*

## REGISTERED DENTISTS OF CONNECTICUT.

Additions and alterations since December 31, 1895.

NOTE.—\* Licensed after examination. † Licensed by diploma from a college recognized by the National Association Dental Examiners.

† F. G. Baldwin, Ansonia.  
 † T. A. Hart, Danbury.  
 † Ellen R. Carr, Hartford.  
 † H. J. Pillion, Hartford.  
 \* S. A. Little, Manchester.  
 † W. S. Smith, Mystic.  
 † J. L. Egan, Naugatuck.  
 \* C. W. Lee, Jr., New Britain.  
 † R. S. Peabody, New Haven.



- † L. H. Abel, Norwich.
- † W. E. Darling, Norwich.
- † V. Hiscox, Norwich.
- † W. J. Hewes, Stamford.
- † I. B. Stilson, Stamford.
- † D. J. Fisher, Voluntown.
- \* B. R. Shopp, Washington.
- \* D. H. Dickerman, Bristol.
- † W. A. Knapp, Waterbury.
- † A. S. LaRue, Waterbury.
- \* G. A. McNeille, Waterbury.
- \* J. J. Smith, Willimantic.

## OUT OF STATE.

- † J. D. Alvord, New York.
- \* C. H. Fischer, Brooklyn.
- † G. L. Fenn, Springfield, Mass.
- † Burton Talmage, Glens Falls, N. Y.

## TEMPORARY PERMITS—SINCE MAY MEETING.

- Fred D. Crosby, D.D.S., Norwalk.
- G. L. Sturgis, D.D.S., New Britain.
- W. T. Casey, D.D.S., Bridgeport.
- A. F. Slater, D.D.S., New Haven.
- J. E. Smith, D.D.S., Glenville.
- E. J. Larkin, D.D.S., Derby.
- G. F. Prentis, New London.

## LEGAL RIGHT.

December, L. J. Sylvester, Manchester.

## DEATHS.

Ralph C. Dunham, New Britain.

Removals and changes of address, none reported.

It would add greatly to the value of these reports if the registered dentists of the State would report changes of address, deaths, etc.

GEO. L. PARMELE, *Recorder.*

## TREASURER'S REPORT

FROM SEPTEMBER 30TH, 1895 TO OCTOBER 1ST, 1896.

[Verified by vouchers on file in Comptroller's and Treasurer's office.]

The Treasurer begs leave to report the following statement of moneys received from the Comptroller, on account of appropriations to the State Board of Health, and of expenditures from September 30th, 1895 to October 1st, 1896.

## RECEIPTS.

1895. Oct. 27.	By overpayment to National Confer.		
	State Bds. of Health,	.	\$ 15.00
" 28.	By cash from Comptroller,	.	800.00
1896. Feb. 28.	" " "	.	800.00
June 26.	" " "	.	800.00
Sept. 11.	" " "	.	800.00
	Salary to Secretary,	.	1,800.00
			<hr/> \$5,015.00

## EXPENDITURES.

For traveling and other necessary expenses of members of Board when on duty, including tele-

grams, telephone and express charges,	.	\$ 604.20
Book and subscriptions to periodicals,	.	176.15
Printing, stationery, etc.,	.	1,320.60
Clerical assistance in Secretary's office,	.	690.00
Postage,	.	98.57
Insurance,	.	4.50
		<hr/> \$2,894.02
Fuel, \$21.40; gas, 1 yr. estimated, \$25.00,	.	46.40
Expert services,	.	119.75
Express charges for delivering Bulletins at P. O.,	.	3.15
Rent of telephone 1 year and out of town service,	.	41.30
Book shelving in office,	.	10.00
Scrub woman, cleaning office,	.	4.50
To framing prize medal certif. Columbian Exposition,	.	5.00
Roller, copies, etc.,	.	68.13
Typewriter supplies,	.	4.75
New Haven Window Shade Co.,	.	18.00
		<hr/> 320.98
Salary of Secretary,	.	1,800.00
		<hr/> \$5,015.00

## THE ACCOUNT RELATING TO THE INVESTIGATION OF WATER.

The Treasurer begs leave to report the following statement of moneys received from the Comptroller and of expenditures on account of the investigation of the natural waters of the State, for the year ending September 30, 1896.

[Verified by vouchers in Comptroller's office.]

1895.		RECEIPTS.			
Oct.	Cash from Comptroller,	.	.	.	\$600.00
1896.					
Feb. 4.	" "	"	.	.	600.00
June 5.	" "	"	.	.	600.00
Sept. 8.	" "	"	.	.	600.00
					<u>—\$2,400.00</u>

1895.		DISBURSEMENTS.			
Oct. 1.	Paid expenses collection samples, travel,				
	exp., etc.,	.	.	.	\$ 81.00
	" Express charges for transportation,	.	.	.	129.30
	" Apparatus and laboratory supplies,	.	.	.	90.64
to	" Printing,	.	.	.	36.10
	" Gas and water,	.	.	.	60.00
	" Prof. H. E. Smith and assistant, ex-				
	pert services,	.	.	.	1,994.00
1896.	Covered back into treasury,	.	.	.	8.96
					<u>—\$2,400.00</u>

## ADDITIONS TO THE LIBRARY.

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### *Books and Pamphlets.*

- Alabama, Report of the Board of Health of the State of, for year 1894.  
American Medical Association, Section on State Medicine.  
Board of Agriculture, Bulletin No. 11, Statistics of the Dairy.  
Boston, 24th Annual Report of the Health Department of the City of.  
Bridgeport, Municipal Register of the City of.  
Brooklyn Library, 38th Annual Report of the Board of Directors of.  
Bulletin of the Department of Labor. No. 1, Nov. 1895. No. 2, Jan. 1896.  
Burlington, Vt., Annual Report of the Health Officers of the City of.  
California, 14th Biennial Report of the State Board of Health of.  
Charities Review, The. Vol. V. No. 1.  
Cincinnati, Annual Report of the Department of Health.  
Cincinnati Hospital, 35th Annual Report of.  
Cities and Towns, The laying out of, Wm. P. Gerhard, C.E.  
City's Waste, The Disposal of a, by Geo. E. Waring, Jr.  
Cleveland, Ohio, 23d Annual Report of the Health Division of the Department of Police of the City of.  
Climates and Resorts, American, from July 1893 to July 1895.  
Colorado Medical Journal. Vol. II. No. 1.  
Colorado Springs, 1st Semi-Annual Report of the Health Department of the City of.  
Connecticut Agricultural Experiment Station, Bulletin 123, Examination of Food Products sold in Connecticut.  
Connecticut Board of Agriculture, 29th Annual Report of the Society of. 1895.  
Connecticut Homœopathic Medical Society, Transactions of. 1895.  
Connecticut Medical Society, Proceedings of. 1895 and 1896.  
Cuba, Spanish Rule in. Laws governing the Island.  
Danielson, Conn., Annual Report of the Officers of the Borough of.  
Delaware, 8th Biennial Report of the Board of Health of the State of, 1892-1894.  
Denver, Col., Report of the Bureau of Health, City of, 1895.  
Department of Labor, Bulletin No. 4, 1896.  
Diatoms, Some Experiments on the growth of, by G. C. Whipple, S.B.  
Disinfection and Disinfectants, by Samuel Rideal.  
District of Columbia, Report of the Health Officer of, 1895.  
Does Science need Secrecy?, a reply to Prof. Porter and others, by Albert Leffingwell, M.D.  
Education, Report of the Commissioners of. Vols. I and II, 1892-93. Vols. I and II, 1893-94.  
Epidemics, and Isolation Hospitals, McNeill.

- Epidemics, etc., Work of the Sanitary Engineers in time of, Wm. P. Gerhard, C.E.
- Factories, The Sanitary Inspection of, by O. W. Braymer, M.D.
- Filters, The Application of Intermittent Filtration to Domestic, Geo. W. Rafter.
- Grand Rapids, Mich., Annual Report of the Board of Health of, 1895-96.
- Hartford County Temporary Home. Report from Oct. 1st, 1893, to Oct. 1st, 1895.
- How to Have Sewers. General Village Sewer Act of the State of New York. E. Delevan Smalley.
- Illinois, 18th Annual Report of the State Board of Health of, 1896—Official Register.
- Indiana, Report of the State Board of Commerce of.
- Indiana, 13th Annual Report of the State Board of Health of.
- Iowa, 8th Biennial Report of the Board of Health of the State of.
- Labor, 10th Annual Report of the Commissioners of. Vol. 1, 1894. Strikes and Lockouts.
- Lake Erie as a Water Supply for the Towns on its Borders, Geo. W. Rafter. Lexicon, Part 22, Pin—Duke. (The New Sydenham Society.)
- Louisiana, Biennial Report of the Board of Health to the General Assembly of the State of, 1894, 1895.
- Maimonides Free Library, Annual Report of the, 1896.
- Maine, 2d Annual Report on Births, Marriages, Divorces and Deaths in the State of, 1893.
- Manchester, N. H., Annual Report of the Board of Health of the City of.
- Maryland, 11th Biennial Report of the State Board of Health of, for two years ending Dec. 31st, 1895.
- Massachusetts, 26th and 27th Annual Reports of the State Board of Health of.
- Medical Jurisprudence, Forensic Medicine and Toxicology. Vols. III and IV. Witthaus and Becker.
- Meriden, Municipal Register, City of, 1895.
- Michigan, 21st Annual Report of the Secretary of the State Board of Health of, 1893.
- Micro-Organisms in Water, by Percy and G. C. Frankland.
- Nebraska, Bulletin of the Agricultural Experiment Station of. Vol. VIII. No. 44.
- New Brunswick, 9th Annual Report of the Provincial Board of Health of.
- New Hampshire, Transactions of the Medical Society, at the 104th Anniversary, 1895.
- New Haven Medical Society, Transactions of, 1896.
- New Haven, Report of the Health Department of the City of, 1895.
- New Jersey, 19th Annual Report of the State Board of Health of.
- New Jersey Sanitary Association, Proceedings of.
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State Board of Health

# BUREAU OF VITAL STATISTICS

STATE OF CONNECTICUT



## REGISTRATION REPORT

FOR THE

YEAR ENDING DECEMBER 31, 1895

NEW SERIES—NO. 18

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Printed by Order of the Legislature

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NEW HAVEN:

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1896



# STATE BOARD OF HEALTH AND BUREAU OF VITAL STATISTICS.

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OFFICE OF THE BUREAU OF VITAL STATISTICS, }  
STATE HOUSE, HARTFORD, NOV. 30, 1896. }

*To his Excellency O. VINCENT COFFIN, Governor of the State of  
Connecticut:*

SIR:—In accordance with the laws of this State, I have the honor to submit to you the detailed abstracts of the Births, Marriages, Divorces and Deaths, that were registered in Connecticut in the year 1895, together with a few suggestions and inferences on the main features of the Vital Statistics of that year.

I have the honor to be

Your very obedient servant,

C. A. LINDSLEY, M.D.,

*Superintendent of Registration of Vital Statistics.*

# REGISTRATION REPORT, 1895.

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*To his Excellency O. VINCENT COFFIN, Governor of Connecticut :*

I have the honor herewith to submit the Eighteenth Annual Report on the Births, Marriages, Divorces and Deaths, registered in Connecticut, under the supervision of the State Board of Health, in the year 1895.

The purpose of this report is self-evident. To present in an intelligent and tabulated form some of the results of enumerating the leading facts relating to the Births, Marriages and Deaths among the people of our commonwealth.

The system of collecting the facts in the several towns is a good, practical, working method, probably not surpassed in efficiency in any other State. But the system of using the facts so collected is exceedingly defective, because it leaves them scattered through all the towns in the State. Under existing legislation there is no possibility of collecting them together and making them available as a whole as reference. The Annual Report on Registration is necessarily by the present laws compiled from "Abstracts" made in each town separately, by as many different persons, most of whom are inexperienced in that kind of work.

In view of these facts the State Board feels that the time has come when it is its imperative duty, in the language of the statute, to "recommend such forms and amendments of law as shall be deemed to be necessary for the thorough organization and efficiency of the registration of Vital Statistics throughout the State."

The State Board of Health therefore proposes to submit to the Legislature of 1897 a bill amending the registration law in such a way as to make it more practical and to enable the records now scattered through the State to be more satisfactorily and fully useful to the public, not only of our own State but of other States.

The reasons for such legislation have been considered in several previous reports and need not be rehearsed in this place.



It is worth while, however, to say in addition to what has been previously said, that the subject is of constantly increasing importance. More States are annually adopting the practice of registration of Vital Statistics, with improved methods. An earnest effort is now being made in the States towards uniformity in keeping records, and so to order the tabulation of statistics that the results in the various States can be readily compared and utilized as a whole.

Under the present system, restricted as it is by Connecticut law, such use of our tables is only possible in a limited degree. As a necessary consequence, in any general presentation of the Vital Statistics of New England and of other States, Connecticut would be excluded.

Still another point deserves consideration and emphasizes the importance of improving our registration laws. The duty recently imposed upon the County Health Officers, of prosecuting for "violation of the registration laws" is being discharged with fidelity and discretion, and has already effected a great improvement in the completeness and accuracy of the records. This makes it still more desirable that, in the interest of social science, we should be enabled to make the best and most profitable use of all the facts on record.

The following is a general summary of the Births, Marriages and Deaths as registered in 1895 :

BIRTHS.			
SEX.		PARENTAGE.	
Males.....	10,240	American .....	8,268
Females.....	9,555	One or both Foreign .....	11,412
Not stated.....	136	Not stated.....	251
Total .....	19,931	Total .....	19,931
Whole number of Births.....		19,931	
Birth-rate per 1,000.....		24.4	

MARRIAGES.	
Both parties American .....	3,655
Both parties Foreign.....	1,842
Husband American, wife Foreign.....	542
Husband Foreign, wife American.....	581
Not stated.....	3
Total Marriages .....	6,623
Total number of persons married .....	13,246

## DEATHS.

SEX.		NATIVITY.	
Males.....	7,418	American.....	10,878
Females.....	7,114	Foreign.....	3,410
Not stated.....	14	Not stated.....	258
Total.....	14,546	Total.....	14,546
Whole number of Deaths.....		14,546	
Death-rate per 1,000.....		17.8	
There was one birth to every.....		40.9	
There was one marriage to every.....		123.3	
There was one person married to every.....		61.6	
There was one death to every.....		56.1	

The total number of births registered in Connecticut during the year 1895 was 19,931 ; of deaths 14,546 ; so that the natural increase of population by excess of births over deaths was 5,385, being 1,261 less than in the previous year.

## TOWNS IN WHICH THE DEATHS EXCEEDED THE BIRTHS.

The registration of the Vital Statistics of the State is always conducted townwise. Although cities and boroughs are often included within the town limits, their populations for death-rates and birth-rates, etc., are counted as part of the population of the towns in which they are respectively located.

In 50 towns the deaths exceeded the births. The total excess of deaths over births in these towns, or the natural loss of population, was 371. The loss in this way was 21 more than in the previous year. The number of towns was 3 more than in the year before.

Two towns of more than 5,000 inhabitants showed a natural loss by deaths over births. They were Groton and Thompson. Where the population is so large this result is remarkable.

In 15 towns of less than 1,000 inhabitants the loss was .....	68
In 26 towns of between 1,000 and 2,000 inhabitants the loss was..	197
In 6 towns of between 2,000 and 3,000 inhabitants the loss was...	77
In 1 town of between 3,000 and 4,000 inhabitants the loss was....	17
In 2 towns of over 5,000 inhabitants the loss was .....	12
Total.....	371

In 6 towns the births and deaths were equal, to wit : Chaplin, Lyme, New Canaan, Prospect, Salisbury, South Windsor.

In 112 towns the births exceeded the deaths.

The towns in which registration shows an excess of deaths over births are the following, arranged by counties :

### HARTFORD COUNTY.

Towns.	Population.	Deaths.	Births.	Loss.
Bloomfield .....	1,350	21	14	7
Burlington .....	1,300	34	33	1
East Granby .....	661	9	8	1
Granby .....	1,250	28	14	14
Hartland .....	565	11	8	3
Newington .....	1,050	16	15	1
Plainville .....	2,000	34	25	9
Rocky Hill .....	1,094	16	14	2
Wethersfield .....	2,300	41	28	13
	<u>11,570</u>	<u>210</u>	<u>159</u>	<u>51</u>

### NEW HAVEN COUNTY.

Towns.	Population.	Deaths.	Births.	Loss.
Cheshire .....	1,850	40	23	17
East Haven .....	1,114	27	17	10
Guilford .....	2,800	66	60	6
Madison .....	1,500	32	18	14
North Branford .....	825	17	10	7
Oxford .....	1,000	24	20	4
Southbury .....	1,000	23	22	1
	<u>10,089</u>	<u>229</u>	<u>170</u>	<u>59</u>

### NEW LONDON COUNTY.

Towns.	Population.	Deaths.	Births.	Loss.
Groton .....	5,593	84	75	9
Ledyard .....	1,175	19	9	10
Lisbon .....	560	14	12	2
North Stonington .....	1,500	36	18	18
Voluntown .....	1,050	26	12	14
	<u>9,878</u>	<u>179</u>	<u>126</u>	<u>53</u>

### FAIRFIELD COUNTY.

Towns.	Population.	Deaths.	Births.	Loss.
Easton .....	1,050	24	15	9
Monroe .....	1,000	22	21	1
New Fairfield .....	650	10	9	1
Ridgefield .....	2,275	56	38	18
Sherman .....	668	10	9	1
Wilton .....	1,722	41	34	7
	<u>7,365</u>	<u>163</u>	<u>126</u>	<u>37</u>

## WINDHAM COUNTY.

Towns.	Population.	Deaths.	Births.	Loss.
Ashford .....	700	23	12	11
Canterbury .....	1,000	21	9	12
Eastford .....	625	19	12	7
Pomfret .....	1,471	41	30	11
Scotland .....	500	9	2	7
Sterling .....	1,051	21	17	4
Thompson .....	5,580	116	113	3
Woodstock .....	2,300	50	30	20
	<hr/> 13,227	<hr/> 300	<hr/> 225	<hr/> 75

## LITCHFIELD COUNTY.

Towns.	Population.	Deaths.	Births.	Loss.
Litchfield .....	3,449	72	55	17
Canaan .....	1,000	16	13	3
Goshen .....	972	13	10	3
Morris .....	570	19	10	9
Sharon .....	1,911	35	32	3
Warren .....	450	13	6	7
	<hr/> 8,352	<hr/> 168	<hr/> 126	<hr/> 42

## MIDDLESEX COUNTY.

Towns.	Population.	Deaths.	Births.	Loss.
Chatham .....	1,949	42	35	7
Clinton .....	1,400	26	22	4
	<hr/> 3,349	<hr/> 68	<hr/> 57	<hr/> 11

## TOLLAND COUNTY.

Towns.	Population.	Deaths.	Births.	Loss.
Andover .....	400	14	9	5
Bolton .....	510	12	9	3
Coventry .....	1,875	39	29	10
Hebron .....	1,000	25	23	2
Mansfield .....	2,080	36	25	11
Somers .....	1,350	44	33	11
Union .....	400	5	4	1
	<hr/> 7,615	<hr/> 175	<hr/> 132	<hr/> 43

The following table gives a summary of the Vital Statistics of the State from 1848, the date of the first Registration Report, up to the present.

**TABLE I.**  
**VITAL STATISTICS FROM 1848 TO 1895.**

Year.	Births.	Birth-rate per 1,000.	Marriages.	Deaths.	Death-rate per 1,000.	Excess of Births over Deaths.	Divorces.	No. Marriages to each Divorce.
1848	6,850	20	2,816	4,379	12.4	2,471	---	---
1849	7,238	20	2,920	5,049	14	2,189	---	---
1850	7,578	20.4	2,884	5,170	14	2,408	---	---
1851	8,362	22	2,995	4,767	13	3,595	---	---
1852	8,302	21.4	3,186	5,596	14.4	2,706	---	---
1853	8,439	21.3	3,202	5,646	14.2	2,793	---	---
1854	10,012	24	4,286	6,094	14.6	3,918	---	---
1856	11,139	25	4,089	6,324	14.9	4,815	---	---
1857	11,355	26	3,647	6,585	16	4,770	---	---
1858	11,299	25	3,737	6,618	15.6	4,681	---	---
1859	11,259	25	3,778	6,533	15	4,726	---	---
1860	11,873	26	4,036	7,602	16.3	4,271	310	13
1861	11,934	25	3,757	7,735	16.5	4,199	275	13.9
1862	10,803	23	3,701	8,541	18	2,262	257	14
1863	9,885	21	3,467	8,442	18	1,443	291	12
1864	9,734	20	4,107	9,109	19	625	426	9.6
1865	10,202	20.8	4,460	7,950	16	2,252	404	11
1866	10,623	23	4,978	7,520	15	4,103	488	10
1867	12,029	23.2	4,779	7,343	14.3	4,686	459	10.4
1868	12,469	23.4	4,734	7,549	15	4,920	478	9.9
1869	12,481	23.5	4,754	8,417	15.6	4,064	491	9.6
1870	13,136	24.2	4,871	8,895	15	4,241	408	11.9
1871	13,114	24	4,882	8,166	14.2	4,948	409	11.9
1872	13,805	25.3	5,023	9,970	18	3,835	464	10.8
1873	14,087	25.6	4,841	9,822	17.4	4,265	457	10.6
1874	14,450	26.2	4,694	8,939	17.2	5,511	492	9.5
1875	14,328	26	4,535	9,883	17	4,495	476	9.4
1876	13,800	25	4,320	10,187	17.5	3,613	396	10.9
1877	14,072	26	4,319	9,696	16	4,376	427	10.1
1878	13,499	24	4,315	9,352	15	4,147	401	10.7
1879	14,051	22.4	4,373	9,394	15	4,657	316	13.7
1880	13,829	22.2	4,745	10,408	16.7	3,421	332	14.2
1881	14,616	22.4	4,850	10,907	17.4	3,709	404	12
1882	13,938	23.9	5,329	11,622	18.7	3,316	392	13.5
1883	15,856	25.4	5,440	11,943	19.1	3,913	433	12.6
1884	15,758	23	5,394	11,351	16.6	4,407	360	14.7
1885	15,496	22.7	5,091	12,033	17.6	3,463	383	13.3
1886	15,934	22.2	5,497	11,616	16.2	4,318	387	14.2
1887	16,583	22.8	5,788	12,385	17	4,198	387	14.9
1888	16,878	22.2	5,969	12,980	17.1	3,898	430	13.8
1889	17,176	23.4	5,744	12,529	17	4,647	536	10.7
1890	17,394	23.3	6,284	13,665	18.3	3,729	477	13.1
1891	18,557	24.8	6,486	14,385	19.2	4,172	475	13.6
1892	19,750	24.7	6,596	15,170	19	4,580	501	13.1
1893	20,296	25.4	6,459	14,901	18.6	5,395	390	16.5
1894	20,345	24.9	5,830	13,699	16.8	6,646	367	15.8
1895	19,931	24.4	6,623	14,546	17.8	5,385	417	15.8





TABLE II.—NEW HAVEN COUNTY.

TOWNS.	BIRTHS.					MARRIAGES.							DEATHS.																			
	Estimated Population.	SEX.		Birth-rate per 1,000.	PARENTAGE.				NATIVITY.				Both non-resident.	SEX.		NATIVITY.																
		Male.	Female.		Total.	Both American	Both Foreign.	Amer. Mother.	For. Father.	Amer. Father.	For Mother.	Both Foreign of diff Nations.		Not stated.	Both American.	Both Foreign.	Husb. American.	Wife Foreign.	Husb. Foreign.	Wife American.	Not stated.	Total.	Husband non-resident.	Both non-resident.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.	Death-rate per 1,000.
New Haven	100,000	1474	1283	21	2778	27.7	1049	1248	200	187	90	4	Not stated.	481	279	81	84	925	51	10	1000	890	--	--	--	--	--	--	186.			
Ansonia	12,000	189	194	3	386	32.1	124	177	37	24	21	3		36	30	8	13	87	5	--	89	107	--	--	--	--	--	--	13.			
Beacon Falls	500	12	5	--	17	34.0	5	12	--	--	--	--		2	--	1	--	1	--	--	5	2	--	--	--	--	--	--	14.0			
Bethany	550	3	3	--	6	10.9	5	1	--	--	--	--		2	--	--	--	2	--	--	1	4	--	--	--	--	--	--	9.0			
Branford	4,500	77	69	5	151	33.4	47	69	14	10	11	--		14	18	4	2	38	2	2	52	47	--	--	--	--	--	--	22.0			
Cheshire	1,850	10	13	--	23	12.4	8	7	7	1	--	--		7	1	--	--	9	3	1	20	20	--	--	--	--	--	--	21.6			
Derby	6,480	117	69	3	189	29.1	74	75	18	10	12	--		34	16	1	12	63	3	3	58	43	--	--	--	--	--	--	15.5			
East Haven	1,114	9	--	--	17	15.2	11	3	1	1	--	--		5	--	--	--	5	--	--	16	11	--	--	--	--	--	--	24.2			
Guilford	2,800	32	28	--	60	21.4	33	12	6	4	5	--		17	2	2	2	23	1	--	35	31	--	--	--	--	--	--	23.5			
Hamden	4,032	52	38	4	94	23.3	42	32	8	7	5	--		8	4	--	2	15	--	--	43	26	--	--	--	--	--	--	17.1			
Madison	1,500	9	8	1	18	12.0	11	5	2	--	--	--		9	--	3	--	12	--	--	19	13	--	--	--	--	--	--	21.3			
Meriden	28,500	375	373	2	7	26.3	218	386	72	46	26	2		99	74	17	37	227	15	4	188	187	--	--	--	--	--	--	13.0			
Middlebury	566	4	5	--	9	15.9	8	1	--	--	--	--		1	--	--	--	1	--	--	2	3	--	--	--	--	--	--	9.0			
Milford	4,000	42	29	--	71	17.7	50	9	7	3	2	--		26	3	--	3	32	3	2	29	32	--	--	--	--	--	--	15.2			
Naugatuck	8,325	171	153	--	324	38.9	102	152	37	19	14	--		36	27	4	1	68	1	--	67	66	--	--	--	--	--	--	15.9			
North Branford	825	3	7	--	10	12.1	10	--	--	--	--	--		4	1	--	--	5	--	--	9	8	--	--	--	--	--	--	20.6			
North Haven	1,900	21	16	--	37	19.4	9	15	4	4	5	--		1	--	--	--	1	--	--	20	12	--	--	--	--	--	--	16.8			
Orange	5,080	70	63	1	134	20.3	79	29	12	10	3	1		26	4	2	1	33	2	--	42	50	--	--	--	--	--	--	18.1			
Oxford	1,000	10	10	--	20	20.0	8	5	2	2	3	--		1	--	--	--	2	--	--	11	13	--	--	--	--	--	--	24.0			
Prospect	500	3	4	2	9	18.0	5	2	1	1	--	--		1	4	--	1	5	--	--	6	3	--	--	--	--	--	--	18.0			
Seymour	3,200	52	35	--	87	27.1	36	32	8	6	5	--		16	5	2	3	26	2	--	26	23	--	--	--	--	--	--	15.3			
Southbury	1,000	10	12	--	22	22.0	15	3	2	2	--	--		4	--	1	--	5	--	--	10	13	--	--	--	--	--	--	23.0			
Wallingford	7,000	89	103	4	196	28.0	69	75	18	19	4	11		32	17	3	5	57	2	1	58	48	--	--	--	--	--	--	15.2			
Waterbury	38,000	659	629	8	1296	34.1	409	563	125	110	45	44		168	155	34	33	390	15	15	384	370	--	--	--	--	--	--	19.8			
Wolcott	540	5	4	--	9	16.6	6	1	--	1	1	--		2	1	--	--	3	--	--	3	4	--	--	--	--	--	--	13.0			
Woodbridge	900	12	7	--	19	21.1	12	1	2	4	--	--		5	--	--	--	5	--	--	6	6	--	--	--	--	--	--	13.3			
Total	236,662	3510	3168	64	6732	28.4	2445	2915	583	471	253	65		1038	638	164	199	12040	105	32	2199	2032	--	--	--	--	--	--	72	17.8		

Death-rate per 1,000.

TABLE II.—NEW LONDON COUNTY.

TOWNS.	Estimated Population.	BIRTHS.				MARRIAGES.								DEATHS.														
		SEX.		Birth-rate per 1,000.	PARENTAGE.				NATIVITY.				SEX.		NATIVITY.													
		Male.	Female.		Total.	Both American.	Both Foreign.	Husb. American.	Wife Foreign.	Husb. Foreign.	Wife American.	Total.	Husband non-resident.	Both non-resident.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.							
New London	15,000	189	176	365	24.3	164	137	34	23	7	---	---	---	104	27	9	17	157	22	12	151	123	---	274	218	56	---	18.2
Bozrah	1,005	14	10	24	23.8	15	4	---	3	2	---	---	---	3	2	---	---	5	---	---	6	10	---	16	13	2	1	15.8
Colchester	3,000	27	26	53	17.7	23	25	1	4	---	---	---	13	7	1	---	---	21	2	---	23	16	---	39	31	8	---	13.0
East Lyme	1,952	24	26	51	26.1	28	14	3	4	2	---	---	6	3	5	---	---	14	---	---	20	15	---	35	31	4	---	17.9
Franklin	475	7	1	8	16.8	7	1	---	---	---	---	---	4	---	---	---	---	4	---	---	5	2	---	7	7	---	---	14.7
Griswold	3,500	56	43	99	28.2	37	41	8	12	1	---	---	19	6	4	2	---	31	3	---	39	29	---	68	47	21	---	19.4
Groton	5,593	30	45	75	13.4	59	10	1	2	3	---	---	27	2	1	---	---	30	7	2	45	39	---	84	75	5	4	15.0
Lebanon	1,700	11	21	32	19.0	24	3	3	1	1	---	---	13	---	1	---	---	14	2	---	17	6	---	23	21	1	1	13.5
Ledyard	1,175	3	5	9	7.6	7	2	---	---	---	---	---	5	---	---	---	---	5	---	---	8	11	---	19	17	---	2	16.2
Lisbon	560	6	6	12	21.4	4	6	2	---	---	---	---	---	---	---	---	---	---	---	---	6	8	---	14	12	2	---	25.0
Lyme	950	7	6	13	13.6	13	---	---	---	---	---	---	3	---	---	---	---	5	---	---	12	1	---	13	12	1	---	13.6
Montville	2,650	35	14	49	18.4	23	12	2	10	2	---	---	11	4	---	---	---	17	---	---	28	15	---	43	34	9	---	16.2
Norwich	24,200	293	279	572	23.6	219	228	72	32	21	---	---	96	55	22	15	---	188	17	---	213	224	---	437	303	134	---	18.0
No. Stonington	1,500	10	7	18	12.0	18	---	---	4	---	3	---	5	---	---	---	---	6	---	---	17	19	---	36	27	2	7	24.0
Old Lyme	1,325	12	11	23	17.3	15	1	---	---	---	---	---	9	---	1	---	---	11	2	---	9	9	1	19	18	1	---	14.3
Preston	2,600	27	27	54	20.3	30	9	5	7	3	---	---	10	1	---	---	---	11	---	---	18	24	---	42	40	2	---	16.1
Salem	475	5	3	8	16.8	6	2	---	---	---	---	---	2	---	---	---	---	2	---	---	---	---	---	4	4	---	---	8.8
Sprague	1,200	16	14	30	25.0	12	14	3	1	---	---	---	6	---	---	---	---	7	---	---	7	12	---	19	12	6	1	16.0
Stonington	7,500	84	91	175	23.3	88	50	13	24	---	---	---	38	11	3	5	---	57	23	4	60	67	---	127	102	22	3	16.9
Voluntown	1,050	7	7	14	13.3	12	2	---	---	---	---	---	6	---	2	---	---	8	---	---	13	13	---	26	21	5	---	24.7
Waterford	2,585	24	20	44	17.0	24	11	3	5	1	---	---	19	1	1	3	---	24	1	---	23	18	---	41	35	6	---	15.8
Total	79,995	887	838	3,1728	21.6	828	572	150	132	43	3	---	399	119	52	47	---	617	79	18	720	665	1	1386	1080	287	19	17.3





TABLE II.—WINDHAM COUNTY.

TOWNS.	Estimated Population.	BIRTHS.				MARRIAGES.						DEATHS.																
		SEX.		Birth-rate per 1,000.	PARENTAGE.				NATIVITY.																			
		Male.	Female.		Total.	Both American.	Both Foreign.	Husb American.	Wife Foreign.	Husb. Foreign.	Not stated.	Total.	Husband non-resident.	Both non-resident.														
															Male.	Female.	Not stated.	SEX.	NATIVITY.									
Brooklyn	2,642	29	34	63	23.8	14	36	9	3	1	Not stated.	8	6	3	3	20	2	---	---	22	22	44	33	11	---	Not stated.	---	16.6
Ashford	700	7	5	12	17.1	12	---	---	---	---	---	3	3	---	---	3	1	---	---	12	11	23	23	---	---	Foreign.	---	32.8
Canterbury	1,000	6	3	9	9.0	6	1	2	---	---	---	2	---	---	---	2	---	---	13	8	21	20	1	---	American.	---	21.0	
Chaplin	550	7	3	10	18.2	8	1	1	---	---	---	3	---	---	---	4	---	---	7	7	10	9	1	---	---	---	18.2	
Eastford	625	8	4	12	19.2	12	---	---	---	---	---	2	---	---	---	2	---	---	8	5	13	11	1	---	---	---	20.8	
Hampton	660	8	5	13	19.7	9	3	---	---	---	---	3	---	---	---	4	---	---	9	2	11	11	---	---	---	---	16.6	
Killingly	7,027	92	81	175	24.9	67	63	20	22	3	---	37	27	7	7	78	9	2	60	57	117	92	21	4	16.6			
Plainfield	5,000	35	50	85	17.0	16	41	18	7	3	---	22	7	4	4	37	4	1	38	46	84	68	16	---	16.8			
Pomfret	1,471	14	16	30	20.4	13	10	2	1	4	---	7	3	1	1	12	5	---	22	19	41	29	7	5	27.8			
Putnam	6,750	109	87	198	29.3	61	70	35	25	2	5	27	6	6	12	51	1	5	58	76	134	96	32	6	19.8			
Scotland	590	---	2	2	4.0	1	---	---	1	---	---	2	---	---	---	3	---	---	4	5	9	8	1	---	---	18.0		
Sterling	1,051	8	9	17	16.1	9	6	---	---	---	---	10	---	---	---	10	1	1	13	8	21	19	1	1	19.9			
Thompson	5,580	56	57	113	20.2	20	75	8	9	1	---	21	13	12	10	56	7	1	50	66	116	84	32	---	20.8			
Windham	10,450	135	109	244	23.3	112	88	21	18	3	2	50	19	9	4	82	---	---	89	131	220	164	56	---	21.0			
Woodstock	2,300	12	18	30	13.0	20	4	1	3	---	2	14	3	1	1	19	2	1	31	19	50	43	3	4	21.3			
Total	46,306	526	483	4,101	21.8	380	398	117	92	17	9	211	84	43	45	383	32	11	432	482	914	710	183	21	19.7			

TOWNS.



TABLE II.—LITCHFIELD COUNTY.

TOWNS.	Estimated Population.	BIRTHS.				MARRIAGES.										DEATHS.												
		SEX.		Birth-rate per 1,000.	PARENTAGE.					NATIVITY.					SEX.		NATIVITY.											
		Male.	Female.		Total.	Both American.	Both Foreign.	Amer. Mother.	For. Father.	Amer. Father.	Both Foreign of diff Nations.	Not stated.	Both American.	Both Foreign.	Husb American.	Wife Foreign.	Husb Foreign.	Wife American.	Not stated.	Total.	Husband non-resident.	Both non-resident.	Male.	Female.	Not stated.	American.	Foreign.	Not stated.
Litchfield	3,449	32	23	55	15.9	30	13	6	3	3	3	12	1	1	2	15	1	1	1	29	43	72	58	14	20.8			
Barkhamsted	1,100	10	10	20	18.1	13	3	1	2	1	1	1	1	1	1	2	1	1	1	9	9	18	17	1	16.3			
Bethlehem	540	7	6	13	24.0	12	1	1	1	1	1	1	1	1	1	2	1	1	1	3	3	4	3	1	7.2			
Bridgewater	600	9	10	19	31.6	11	6	1	1	1	1	2	2	2	2	2	2	2	2	4	4	13	13	3	21.6			
Canaan	1,000	8	5	13	13.0	12	1	1	1	1	1	5	1	1	1	6	6	6	6	7	7	16	13	1	16.0			
Colebrook	1,200	15	8	22	10.9	11	1	1	1	1	1	6	1	1	1	7	7	7	7	2	2	10	9	1	9.0			
Cornwall	1,100	4	8	12	18.3	18	2	2	2	2	2	8	1	1	1	8	8	8	8	11	10	21	18	3	17.5			
Goshen	972	5	5	10	10.2	7	1	1	1	1	1	3	2	2	1	4	4	4	4	4	9	13	11	2	13.3			
Harwinton	943	13	11	24	25.4	9	11	1	1	1	2	3	2	2	1	7	7	7	7	7	6	13	10	3	13.6			
Kent	1,200	11	12	23	19.1	18	2	2	2	1	1	6	1	1	1	7	7	7	7	10	4	14	13	1	11.6			
Morris	570	4	6	10	17.5	8	2	2	2	1	1	3	1	1	1	4	4	4	4	8	11	19	13	5	33.3			
New Hartford	3,100	31	45	77	24.8	23	45	2	6	6	1	9	23	2	1	35	1	1	1	28	32	61	49	12	19.3			
New Milford	3,960	46	64	110	27.7	72	24	6	7	7	1	24	6	2	1	33	1	1	1	42	47	89	79	8	20.2			
Norfolk	1,546	16	17	34	21.9	25	2	1	6	1	1	5	1	1	1	6	6	6	6	14	12	27	24	3	17.4			
North Canaan	1,700	15	24	39	23.0	22	8	2	4	3	2	2	1	1	1	2	2	2	2	9	16	25	22	3	14.7			
Plymouth	2,136	26	32	58	27.1	26	19	6	5	2	2	9	1	1	1	10	10	10	10	22	14	36	30	6	16.8			
Roxbury	936	7	11	18	19.2	13	3	3	3	1	1	4	1	1	1	5	5	5	5	5	9	14	12	1	14.7			
Salisbury	3,520	39	34	73	20.7	36	28	3	1	1	5	11	1	4	2	18	6	3	3	44	29	73	56	6	20.7			
Sharon	1,911	20	10	32	16.7	24	4	3	1	1	1	10	1	1	1	10	4	1	1	16	19	35	32	3	18.3			
Thomaston	3,400	32	32	64	18.8	24	25	12	1	1	2	11	4	2	2	17	1	1	1	20	18	38	31	5	11.1			
Torrington	8,955	79	90	171	19.0	69	63	15	17	17	7	28	25	7	9	69	1	4	4	54	63	117	90	26	13.0			
Warren	450	2	4	6	13.3	6	1	1	1	1	1	2	1	1	1	3	3	3	3	7	6	13	10	3	28.8			
Washington	1,800	17	16	33	18.3	19	11	1	1	1	2	9	3	3	1	6	6	6	6	16	10	26	22	3	14.4			
Watertown	2,800	27	27	54	19.3	27	17	1	6	3	1	9	5	4	2	20	1	1	1	20	13	33	27	6	11.6			
Winchester	7,200	89	50	139	19.3	82	26	10	14	6	6	43	10	8	9	70	5	1	1	58	52	110	88	22	15.2			
Woodbury	1,800	17	25	42	23.3	28	6	5	3	3	1	13	1	1	1	15	2	2	2	17	17	34	27	7	19.0			
Total	57,888	581	584	6,117	20.2	645	322	82	81	81	40	1,231	84	28	34	377	25	11	11	480	452	944	777	145	22	16.3		

TABLE II.—MIDDLESEX COUNTY.

TOWNS.	BIRTHS.					MARRIAGES.							DEATHS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	Estimated Population.	SEX.		Birth-rate per 1,000.	PARENTAGE.				NATIVITY.			SEX.		NATIVITY.			Death-rate per 1,000.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		Male.	Female.		Total.	Both American.	Both Foreign.	For. Father.	Amer. Mother.	For. Father.	Amer. Mother.	Both American.	Both Foreign.	Husb American.	Wife Foreign.	Husb. Foreign.		Wife American.	Total.	Husband non-resident.	Both non-resident.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

\* Deaths of non-residents in public institutions: Middletown 116, deducted from total in estimating death-rate.



TABLE III.—RECAPITULATION BY COUNTIES.

COUNTIES.	BIRTHS.										MARRIAGES.							DEATHS.										
	Estimated Population.	SEX.			PARENTAGE.						NATIVITY.							SEX.			NATIVITY.							
		Male.	Female.	Total.	Birth-rate per 1,000.	Both American.	Both Foreign.	Amer. Mother. For. Father.	Amer. Father. For. Mother.	Both diff. Nations Not stated.	Both American.	Both Foreign.	Husb. American. Wife Foreign.	Husb. Foreign. Wife American.	Not stated.	Total.	Husband non-resident.	Both non-resident.	Male.	Female.	Not stated.	Total.	American.	Foreign.	Not stated.			
Hartford -----	161,725	1956	1930	15	3901	24.1	1547	1560	333	318	125	18	803	422	123	128	1	1477	128	59	1437	1390	--	2827	2068	723	36	17.5
New Haven -----	236,662	3510	3168	54	6732	28.4	2445	2915	583	471	253	65	1038	638	164	199	1	2040	105	32	2199	2032	1	4232	3021	1139	72	17.8
New London -----	79,995	887	838	3	1728	21.6	828	572	150	132	43	3	399	119	52	47	--	617	79	18	720	665	1	1386	1080	287	19	17.3
Fairfield -----	166,927	2045	1882	51	3978	23.2	1748	1186	296	277	322	149	685	358	101	87	--	1231	102	27	1543	1516	10	3069	2337	656	76	18.3
Windham -----	46,306	526	483	4	1013	21.8	380	398	117	92	17	9	211	84	43	45	--	383	32	11	432	482	--	914	710	183	21	19.7
Litchfield -----	57,888	581	584	6	1171	20.2	645	322	82	81	40	1	231	84	28	34	--	377	25	11	480	462	2	944	777	145	22	16.3
Middlesex -----	41,317	452	427	--	879	21.2	440	285	67	52	34	1	172	72	18	21	--	283	45	14	373	352	--	725	551	170	4	17.5
Tolland -----	25,892	283	243	3	529	20.4	235	173	68	35	13	5	116	65	13	20	1	215	18	24	234	215	--	449	334	107	8	17.3
Total -----	816,712	10240	9555	136	19931	24.4	8268	7411	1696	1458	847	251	3655	1842	542	581	3	6623	534	196	7418	7114	14	14546	10878	3410	258	17.8



TABLE IV.

EXHIBITING THE NUMBER OF BIRTHS BY SEXES IN THE COUNTIES FOR  
EACH MONTH IN THE YEAR ENDING DEC. 31, 1895.

COUNTIES.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mo. not sta.	Total.
Hartford	Male	156	150	170	148	149	173	185	185	176	155	150	159	..	1,956
	Female	163	179	170	151	153	134	168	185	163	174	142	148	..	1,930
	Not stated	1	3	1	---	---	---	2	2	1	1	1	3	..	15
		320	332	341	299	302	307	355	372	340	330	293	310	..	3,901
New Haven	Male	308	253	311	284	282	291	321	284	310	277	282	307	..	3,510
	Female	298	237	283	239	250	229	279	283	296	257	254	263	..	3,168
	Not stated	6	3	6	7	3	4	6	5	3	5	4	2	..	54
		612	493	600	530	535	524	606	572	609	539	540	572	..	6,732
New London	Male	78	62	85	64	81	66	76	82	85	68	65	75	..	887
	Female	84	76	68	69	71	68	64	71	91	50	61	65	..	838
	Not stated	---	---	---	1	1	---	---	---	1	---	---	---	..	3
		162	138	153	134	153	134	140	153	177	118	126	140	..	1,728
Fairfield	Male	207	194	182	166	159	143	190	151	193	182	157	121	..	2,045
	Female	159	153	176	157	153	152	166	151	166	172	149	128	..	1,882
	Not stated	6	3	5	3	2	3	1	3	11	2	4	8	..	51
		372	350	363	326	314	298	357	305	370	356	310	257	..	3,978
Windham	Male	50	36	45	47	48	42	32	51	51	48	36	40	..	526
	Female	35	41	45	38	47	38	44	49	34	41	39	32	..	483
	Not stated	---	---	---	---	---	---	3	---	1	---	---	---	..	4
		85	77	90	85	95	80	79	100	86	89	75	72	..	1,013
Litchfield	Male	51	65	42	40	54	38	56	55	49	50	40	41	..	581
	Female	47	49	58	46	43	31	56	57	42	64	44	47	..	584
	Not stated	1	---	---	---	1	---	---	1	---	1	1	1	..	6
		99	114	100	86	98	69	112	113	91	115	85	89	..	1,171
Middlesex	Male	48	38	42	31	47	38	36	40	36	35	23	38	..	452
	Female	32	42	32	36	32	35	38	41	48	41	24	26	..	427
	Not stated	---	---	---	---	---	---	---	---	---	---	---	---	..	---
		80	80	74	67	79	73	74	81	84	76	47	64	..	879
Tolland	Male	24	25	26	34	33	22	26	22	18	17	17	19	..	283
	Female	24	16	20	19	24	18	19	20	28	22	15	18	..	243
	Not stated	---	1	---	---	---	---	---	---	---	1	---	1	..	3
		48	42	46	53	57	40	45	42	46	40	32	38	..	529
Totals	Male	922	823	903	814	853	813	922	870	918	832	770	800	..	10,240
	Female	842	793	852	755	773	705	834	857	868	821	728	727	..	9,555
	Not stated	14	10	12	11	7	7	12	11	17	10	10	15	..	136
Grand Total		1778	1626	1767	1580	1633	1525	1768	1738	1803	1663	1508	1542	..	19,931



TABLE V.

EXHIBITING THE NUMBER OF DEATHS BY SEXES IN THE COUNTIES FOR EACH MONTH IN THE YEAR ENDING DEC. 31, 1895.

COUNTIES.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mo. not sta.	Total.
Hartford	Male.....	93	142	151	98	112	117	128	140	103	121	109	123	--	1,437
	Female.....	93	144	142	117	80	77	140	123	100	128	118	128	--	1,390
	Not stated.....													--	
		186	286	293	215	192	194	268	263	203	249	227	251	--	2,827
New Haven	Male.....	167	174	197	187	105	170	237	189	189	210	152	161	1	2,199
	Female.....	168	199	180	167	148	137	197	199	176	157	159	145	--	2,032
	Not stated.....							1						--	1
		335	373	377	354	313	307	435	388	365	367	311	306	1	4,232
New London	Male.....	59	66	77	56	56	44	58	68	69	52	54	61	--	720
	Female.....	57	72	72	54	42	36	55	55	68	43	63	48	--	665
	Not stated.....						1							--	1
		116	138	149	110	98	81	113	123	137	95	117	109	--	1,386
Fairfield	Male.....	112	126	157	111	125	105	156	162	133	128	111	116	1	1,543
	Female.....	91	157	144	115	128	87	146	158	143	125	105	117	--	1,516
	Not stated.....	1		2	1	3		1				1	1	--	10
		204	283	303	227	256	192	303	320	276	253	217	234	1	3,069
Windham	Male.....	27	31	54	49	44	30	32	46	49	25	20	25	--	432
	Female.....	39	43	48	54	49	39	25	49	44	30	29	33	--	482
	Not stated.....													--	
		66	74	102	103	93	69	57	95	93	55	49	58	--	914
Litchfield	Male.....	33	51	46	37	45	35	32	43	46	41	34	37	--	480
	Female.....	30	63	40	49	31	33	34	39	43	44	23	33	--	462
	Not stated.....								1				1	--	2
		63	114	86	86	76	68	66	83	89	85	57	71	--	944
Middlesex	Male.....	29	24	30	46	34	28	29	31	33	32	26	31	--	373
	Female.....	22	40	52	32	20	15	24	33	22	30	24	38	--	352
	Not stated.....													--	
		51	64	82	78	54	43	53	64	55	62	50	69	--	725
Tolland	Male.....	20	32	21	21	22	17	9	22	19	17	14	20	--	234
	Female.....	18	16	30	26	18	15	16	29	14	9	11	13	--	215
	Not stated.....													--	
		38	48	51	47	40	32	25	51	33	26	25	33	--	449
Totals	Male.....	540	646	733	605	603	546	681	701	641	626	520	574	2	7,418
	Female.....	518	734	708	614	516	439	637	685	610	566	532	555	--	7,114
	Not stated.....	1		2	1	3	1	2	1			1	2	--	14
Grand Total		1059	1380	1443	1220	1122	986	1320	1387	1251	1192	1053	1131	2	14,546



## ORDER 2. DIARRHOEAL.

Cholera Infantum	660	39	--	11	2	1	--	6	2	6	3	3	--	1	52	3	1	2	--	1	3	1	1	3148
Infantile Diarrhoea	229	16	2	--	--	1	--	1	--	1	--	1	--	2	1	--	--	--	--	--	--	--	227	
Cholera Morbus	40	2	--	--	--	--	--	--	1	--	--	--	--	1	--	--	1	--	--	--	--	--	7	
Dysentery	177	5	--	10	--	--	--	1	1	--	--	--	1	--	--	--	1	--	8	--	--	1	32	
Diarrhoea	146	25	--	1	3	1	--	--	1	--	--	--	--	1	--	--	1	2	--	--	--	--	138	

### ORDER 3. MALARIAL.

	24	1		1
Intermittent Fever.....	---	---	---	---
Remittent Fever.....	10	---	---	---
Pernicious or Congestive Fever.....	13	---	---	---
Other Malarial Diseases.....	69	3	---	---

#### ORDER 4. ZOOGENOUS.

Hydrophobia .....	2
-------------------	---

### ORDER 5. VENEREAL.

Syphilis	20	2	1	3
Gonorrhœa, Stricture of Urethra	4			

## ORDER 6, SEPTIC.

Case	Age	Sex	Duration of Illness	Temperature	Pulse	Respiration	Weight	Height	Head	Neck	Chest	Abdomen	Genitals	Stool	Urine	Spinal Fluid	Diagnosis	Prognosis	Remarks
1	36	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Erysipelas	---	---
2	51	1	---	1	---	---	---	---	---	---	---	---	---	---	---	---	Pyæmia, Septicæmia	---	---
3	43	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Puerperal Fever	---	---

## Class II.—Parasitic Diseases.

[illegible]

TABLE VI.—CONTINUED. HARTFORD COUNTY.

CAUSES OF DEATH.	HARTFORD COUNTY.																				TOTAL.										
	STATE.	Hartford.	Avon.	Berlin.	Bloomfield.	Bristol.	Burlington.	Canton.	East Granby.	East Hartford.	East Windsor.	Enfield.	Farmington.	Glastonbury.	Granby.	Hartland.	Manchester.	Marlborough.	New Britain.	Newington.	Plainville.	Rocky Hill.	Simsbury.	South Windsor.	Suffield.	West Hartford.	Wethersfield.	Windsor.	Windsor Locks.		
Class III.—Dietetic Diseases.																															
Starvation	4	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	2	
Intemperance	10	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
Chronic Alcoholism	41	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	15	
Delirium Tremens	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	
Other Dietetic Diseases	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	
Class IV.—Constitutional Diseases.																															
Rheumatism	91	5	—	—	—	2	—	—	—	—	—	2	—	—	—	—	—	—	1	—	—	1	—	—	—	1	—	—	—	—	12
Gout	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Rickets	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cancer not located	97	11	—	1	—	1	1	—	—	1	—	—	—	—	1	—	2	1	—	—	—	1	—	—	1	1	—	1	—	—	23
Cancer of Breast	62	5	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	3	—	2	—	—	—	1	—	—	—	—	—	14
Cancer of Stomach	107	13	—	—	—	3	1	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	1	1	1	—	—	2	—	26
Cancer of Womb	73	9	—	—	—	1	—	—	—	—	—	—	1	—	—	—	1	2	—	—	—	—	—	1	1	—	—	1	—	—	20
Cancer of other Organs	132	6	1	—	—	2	—	—	—	—	—	3	—	—	—	—	1	1	—	—	—	—	—	—	—	—	2	1	1	—	21
Tabes Mesenterica	117	6	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
Tubercular Meningitis, Acute Hydroceph.	84	3	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	8
Phthisis	1358	116	—	4	2	6	3	8	—	8	4	10	2	7	4	—	20	—	38	1	—	1	1	10	3	2	3	4	5	—	264

[illegible]

### Class V.—Developmental Diseases.

[illegible]

## Class VI.—Local Diseases.

## ORDER 1. OF NERVOUS SYSTEM.

[illegible]





Angina Pectoris	67	--	1	--	--	1	--	--	--	--	--	4	--	--	1	--	1	15
Syncope	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aneurism	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Senile Gangrene	34	3	--	--	--	--	--	--	--	1	1	--	--	--	--	--	--	5
Thrombosis, Embolism	36	3	--	--	--	--	--	--	--	--	--	--	--	--	1	2	--	6
Phlebitis	4	--	--	--	--	1	--	--	--	--	--	--	--	1	--	2	--	2
Other Diseases of Circulatory System	116	2	1	1	--	--	1	1	2	--	--	1	1	--	--	--	--	9
<b>ORDER 4. OF RESPIRATORY SYSTEM.</b>																		
Laryngitis	35	2	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	3
Catarrhal Croup	7	--	--	--	--	--	--	--	--	--	--	4	--	--	1	--	--	5
Other Diseases of Larynx or Trachea	3	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--
Emphysema, Asthma	61	--	--	1	--	--	--	--	--	1	--	--	--	--	--	2	--	7
Bronchitis	539	30	1	1	7	4	3	6	2	8	1	--	5	15	1	1	3	103
Pneumonia	1289	105	4	7	3	7	2	1	6	3	12	4	5	3	1	8	6	260
Pleurisy	44	2	--	--	--	--	--	--	--	--	--	2	1	--	--	1	--	6
Other Diseases of Respiratory System	86	3	--	--	--	1	--	1	--	1	--	1	4	2	4	--	--	16

## ORDER 5. OF DIGESTIVE SYSTEM.

Stomatitis	10	--	--	--	--	--	1	--	--	--	1	--	2
Dentition	38	1	--	1	--	--	--	--	--	--	--	--	2
Quinsy	10	1	--	--	--	--	--	--	--	--	--	--	1
Dyspepsia	15	1	--	1	--	--	--	--	--	--	3	--	3
Hæmatemesis	8	3	--	--	--	--	--	--	--	--	2	--	5
Disease of Stomach	134	6	1	--	1	--	3	2	4	--	3	--	26
Ulcer of Stomach	22	2	1	--	1	--	--	--	--	--	2	--	6
Enteritis	103	9	2	1	--	--	1	--	--	--	6	--	22
Appendicitis	31	8	--	1	1	--	2	--	--	--	1	--	16
Ulcuration of Intestines	14	--	--	--	--	--	--	--	--	--	--	1	2
Obstruction of Intestines	43	5	--	1	--	--	1	1	--	--	--	--	9

TABLE VI—CONTINUED. HARTFORD COUNTY.

CAUSES OF DEATH.	LOCALITIES.																											Total.				
	STATE.	Hartford.	Avon.	Berlin.	Bloomfield.	Bristol.	Burlington.	Canton.	East Granby.	East Hartford.	East Windsor.	Enfield.	Farmington.	Glastonbury.	Granby.	Hartland.	Manchester.	Marlborough.	New Britain.	Newington.	Plainville.	Rocky Hill.	Simsbury.	Southington.	South Windsor.	Suffield.	West Hartford.		Wethersfield.	Windsor.	Windsor Locks.	
Strangulation of Intestines	4																		1											1		
Intussusception of Intestines	6																															
Hernia	29	3												1					1								1					
Fistula	5													1																	1	
Peritonitis (not puerperal)	129	11		1					2	2						2			7				1	1							27	
Ascites	7																					1									1	
Gallstones	5																														1	
Cirrhosis of Liver	71	10	1		1						3			1				1			1		1						1		20	
Hepatitis	29	2						1				2						1											1		7	
Jaundice	2	1																												1	7	
Other Diseases of Liver	46	2	1								1										1		1		1					1	7	
Other Diseases of Digestive System	24										1										2								1		2	
ORDER 6. OF LYMPHATIC SYSTEM AND DUCTLESS GLANDS.																																
Addison's Disease	4																	1													1	
Disease of Spleen	1																															
Bronchocele	1																															
Diseases of Lymphatic System	7	1								1	1																				3	
ORDER 7. OF URINARY SYSTEM.																																
Nephritis	231	18				1		1		2	2							4			1				5	2	1				37	
Bright's Disease	306	29	1		4		1			8	7	3	2	2		4		3	1				2				3	2	1	1	2	78

[illegible]

### ORDER 8. OF GENERATIVE SYSTEM.

### A. Diseases of the Reproductive Organs.

Diseases of the Uterus . . . . .	15	1	-	-	-	-	-	-	-
Metritis . . . . .	2	-	-	-	-	-	-	-	1
Disease of Ovaries . . . . .	17	-	-	-	-	-	-	-	-
Disorders of Menstruation . . . . .	4	-	-	-	-	-	-	-	-
Pelvic Abscess . . . . .	2	-	-	-	-	-	-	-	-
Diseases of Testis, Penis, Scrotum, etc., . . . . .	5	1	-	-	-	-	-	-	1
 B. Diseases of Parturition.									
Abortion and Miscarriage . . . . .	26	-	1	-	-	-	-	2	-
Puerperal Mania . . . . .	1	-	-	-	-	-	-	-	-
Puerperal Convulsions . . . . .	12	-	-	-	-	1	-	-	1
Puerperal Hæmorrhage . . . . .	9	-	-	-	-	1	-	-	1
Placenta Previa . . . . .	6	-	-	-	-	-	-	-	1
Other Accidents of Childbirth . . . . .	47	5	-	-	2	2	-	1	13
 ORDER 9. OF ORGANS OF LOCOMOTION.									
Caries, Necrosis . . . . .	1	-	-	-	-	-	-	-	-
Arthritis, Periostitis . . . . .	9	-	-	-	-	-	-	-	-

### B. Diseases of Parturition.

Abortion and Miscarriage	26	1	3	2	3
Puerperal Mania	1				3
Puerperal Convulsions	12		1		1
Puerperal Hæmorrhage	9		1		3
Placenta Previa	6				1
Other Accidents of Childbirth	47	5	2	1	13
ORDER 9. OF ORGANS OF LOCOMOTION.					
Caries, Necrosis	1				
Arthritis, Periostitis	9				

## ORDER 9. OF ORGANS OF LOCOMOTION.

Caries, Necrosis	1
Arthritis, Periostitis	9









### Class III.—Orders.

Class III.—Orders.																	
Dietetic Diseases																	
77	13				1						1				2	1	20
Class IV.—Orders.																	
Constitutional Diseases																	
2435	192	1	5	3	23	6	9	2	12	7	21	5	9	4	1	27	447
Class V.—Orders.																	
Developmental Diseases																	
939	79	2	1		5	3		1	6	4	14	1	6	3	1	7	177
Class VI.—Orders.																	
1. Diseases of Nervous System																	
1991	160	1	6	7	12	4	11		6	16	12	4	6	7	2	12	369
8																1	2
Organs of Special Sense																	
1221	81	3	1		7	4	3		9	2	10	6	3	3	1	11	213
3. Circulatory System																	
2064	142	5	7	4	15	6	4		13	6	20	6	6	4	1	17	401
4. Respiratory System																	
782	65	4	4	2	5	1		1	7	4	12	2	5	1		9	166
5. Digestive System																	
13										1	1						4
6. Lymph. Sys. and Ductless Glands																	
696	60		1	1	5		3		10	7	6	3	2	3	1	7	146
7. Urinary System																	
146	7				1				2		3					1	23
8. Generative System																	
10																	3
Organs of Locomotion																	
16	2										1						3
Integumentary System																	
Class VII.—Orders.																	
1. Accident or Negligence																	
597	50	1	4	1	5	1	1		9	1	3	2	1			5	107
8																	1
2. Homicide																	
107	6						1				2	1				2	18
3. Suicide																	
4. Execution																	
Class VIII.—Orders.																	
1. Ill-defined																	
683	56		5	1	8	2	4	2	1		6	5	1		1	7	148
22																4	8
2. Cause not stated																	

## Class VII.—Orders.

[illegible]

## Class VIII.—Orders.

1. Ill-defined	683	--	5	1	8	2	4	2	1	--	6	5	1	--	1	7	--	27	1	--	1	1	2	2	4	1	6	1	3	148
2. Cause not stated	22	--	1	--	--	--	--	--	--	--	--	--	1	--	1	4	--	--	--	--	--	--	--	--	1	--	--	--	8	2



## ORDER 2. DIARRHEAL.

ORDER 2. DIARRHEAL.																		
Cholera Infantum	660	100	8	1	2	4	7	3	3	18	2	6	1	4	1	1	153	215
Infantile Diarrhoea	229	71	2	1	1	1	2	2	2	14	2	1	1	1	2	1	13	110
Cholera Morbus	40	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	13
Dysentery	177	27	2	1	1	1	1	1	1	1	1	1	1	1	1	1	7	45
Diarrhoea	146	12	1	1	2	1	1	2	1	1	1	1	1	4	1	1	9	35
ORDER 3. MALARIAL.																		
Intermittent Fever	24	7	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	11
Remittent Fever	10	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	3
Pernicious or Congestive Fever	13	3	1	1	1	1	1	1	1	7	1	1	1	1	1	1	1	7
Other Malarial Diseases	69	28	1	1	1	1	1	1	1	4	1	1	1	1	1	1	1	38
ORDER 4. ZOOGENOUS.																		
Hydrophobia	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ORDER 5. VENEREAL.																		
Syphilis	20	6	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	8
Gonorrhoea, Stricture of Urethra	4	2	1	1	1	1	1	1	1	3	1	1	1	1	1	1	1	3
ORDER 6. SEPTIC.																		
Erysipelas	36	5	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	7
Pyæmia, Septicæmia	51	3	1	1	1	1	1	1	1	2	1	1	1	3	1	2	3	15
Puerperal Fever	43	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	13
Class II.—Parasitic Diseases.																		
Thrush	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

## Class II.—Parasitic Diseases.



TABLE VI.—CONTINUED. NEW HAVEN COUNTY.

CAUSES OF DEATH.	NEW HAVEN COUNTY.																									STATE.	
	New Haven.	Ansonia.	Beacon Falls.	Bethany.	Branford.	Cheshire.	Derby.	East Haven.	Guilford.	Hamden.	Madison.	Meriden.	Middlebury.	Milford.	Naugatuck.	North Branford.	North Haven.	Orange.	Oxford.	Prospect.	Seymour.	Southbury.	Wallington.	Waterbury.	Wolcott.		Woodbridge.
<b>Class III.—Dietetic Diseases.</b>																											
Starvation	4	—	—	—	—	—	—	—	—	—	1	1	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Intemperance	10	—	—	—	—	—	—	—	—	—	1	1	1	—	—	—	—	—	—	—	—	—	—	1	—	—	4
Chronic Alcoholism	41	9	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	14
Delirium Tremens	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Dietetic Diseases	4	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
<b>Class IV.—Constitutional Diseases.</b>																											
Rheumatism	91	20	1	—	—	—	—	—	—	—	—	3	—	—	—	—	1	—	—	—	—	—	—	1	6	—	32
Gout	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rickets	9	1	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	3
Causes not located	97	6	—	—	1	1	1	—	1	—	3	3	—	—	—	—	—	—	—	—	—	—	1	2	—	—	15
Cancer of Breast	62	11	—	—	1	—	—	—	—	—	2	2	3	—	—	1	—	—	1	—	—	2	1	—	—	—	22
Cancer of Stomach	107	13	—	—	1	—	—	—	—	1	6	6	—	—	—	1	—	3	1	—	—	—	1	1	—	—	28
Cancer of Womb	73	10	1	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1	4	—	—	17
Cancer of other Organs	132	21	1	—	—	—	—	—	1	1	1	8	—	—	—	1	5	—	—	—	—	—	1	5	—	—	45
Tabes Mesenterica	117	1	5	—	—	—	—	—	1	—	1	2	—	—	1	—	—	—	—	—	—	4	—	1	14	—	32
Tubercular Meningitis, Acute Hydroceph.	84	12	2	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	1	4	—	—	—	—	18
Phthisis	1358	199	24	2	11	1	5	—	4	7	2	50	1	8	17	3	4	1	1	—	—	2	—	—	—	—	417





[illegible]

## ORDER 5. OF DIGESTIVE SYSTEM.

Stomatitis  
Dentition  
Quinsy  
Dyspepsia  
Hæmatemesis  
Disease of Stomach  
Ulcer of Stomach  
Enteritis  
Appendicitis  
Ulceration of Intestines  
Obstruction of Intestines





[illegible]

## ORDER 8. OF GENERATIVE SYSTEM.

### A. Diseases of the Reproductive Organs.

[illegible]

### B. Diseases of Parturition.

[illegible]

## ORDER 9. OF ORGANS OF LOCOMOTION.

	1	2	3
Caries, Necrosis	1		
Arthritis, Periostitis	9	2	1







### Class III.—Orders.

[illegible]

### Class IV.—Orders.

Class IV.—Orders.																											
Constitutional Diseases-----																											
2435	308	36	3	--	16	2	8	--	6	12	3	81	1	13	23	3	7	13	3	2	6	3	18	116	--	2	685

## Class V.—Orders.

Class V.—Orders.																												
Developmental Diseases -----																												
																										</		

## Class VI.—Orders.

Class VI.—Orders.																										
1.	Diseases of Nervous System	1991	251	39	3	15	7	19	3	9	8	6	46	6	21	3	16	3	1	7	5	13	96	1	2	580
2.	Organs of Special Sense	8	1																							2
3.	Circulatory System	1221	123	18	1	3	4	10	3	1	10	5	29	3	10	1	5	8	2	1	8	3	10	35	1	294
4.	Respiratory System	2064	285	25		18	8	15	4	2	5	3	48	13	16	2	6	12	2	2	9	2	13	106	1	601
5.	Digestive System	782	105	9	1	1	1	3	1	3	3	3	16		5	4	2	2	3	1	1	1	7	43	1	216
6.	Lymph. Sys. and Ductless Glands	13									1		2												4	
7.	Urinary System	696	96	10		6	1	7		5	4	1	21		1	2	2	3	3		2	3	26		193	
8.	Generative System	146	19	2				1		2	1		2		2	3	1				1		15		49	
9.	Organs of Locomotion	10	2	1																					3	
10.	Integumentary System	16	1																			1	2		4	

## Class VII.—Orders.

[illegible]

## Class VIII.—Orders.

[illegible]



TABLE VI—Continued.  
NEW LONDON COUNTY.

CAUSES OF DEATH.		STATE.	New London.	Bozrah.	Colchester.	East Lyme.	Franklin.	Griswold.	Groton.	Lebanon.	Ledyard.	Lisbon.	Lyme.	Montville.	Norwich.	No Stonington.	Preston.	Salem.	Sprague.	Stonington.	Voluntown.	Waterford.	Total.
Class I.—Zymotic Diseases.																							
ORDER 1. MIASMATIC.																							
Small Pox	1	1																					
Variceloid	2	2																					
Chicken Pox	3	3					1																
Measles	26	26					4					1											
Scarlet Fever	65	65	2														1						
Influenza	275	275	2				5	3	3				1		4		3		1		1		
Typhoid Fever	259	259					1	1							5								
Cerebro-Spinal Fever	41	41	2												1				1				
Continued Fever	25	25													1				1				
Whooping Cough	127	127													1								
Diphtheria	262	262						1							6				1	3	1		
Membranous Croup	126	126	2												6								
Other Miasmatic Diseases	7	7																					







TABLE VI—CONTINUED. NEW LONDON COUNTY.

CAUSES OF DEATH.	STATE.																			Total.	
	New London.	Bozrah.	Colchester.	East Lyme.	Franklin.	Griswold.	Groton.	Lebanon.	Ledyard.	Lisbon.	Lyme.	Montville.	Norwich.	No. Stonington.	Old Lyme.	Preston.	Salem.	Sprague.	Stonington.		Voluntown.
Insanity	56	2											3						1		
Chorea	3		1																1		
Epilepsy	64					1						1	3	1		1					
Convulsions	327	8					4					1	8	1					4		
Trismus Nascentium	10																				
Tetanus	23												1								
Paraplegia	5																				
Diseases of Spinal Cord	17														1						
Myelitis	19	1						1					1								
Spinal Meningitis	48						1	2					1								
Locomotor Ataxia	13																				
Other Diseases of Nervous System	241	5	2			1	2						13	2					1		1
ORDER 2. OF ORGANS OF SPECIAL SENSE.																					
Epistaxis	2																				
Otitis	4																				
Other Diseases of Eye, Ear or Nose	2																				
ORDER 3. OF CIRCULATORY SYSTEM.																					
Endocarditis	124	1		3		2	1							1		1					
Valvular Disease of Heart	254	2				3		1	1				20		1	2		1		2	33
Disease of Heart	549	18	1	3	4		10	1	2	1	1	2	14						15	2	76
Pericarditis	22												1						1		2



[illegible]

## ORDER 5. OF DIGESTIVE SYSTEM.

Stomatitis	10	1	1	1	1	1	3
Dentition	38	—	—	—	—	—	2
Quinsy	10	—	—	1	1	1	1
Dyspepsia	15	—	—	1	—	—	5
Hæmatemesis	8	—	—	—	—	—	—
Disease of Stomach	131	4	—	—	—	4	8
Ulcer of Stomach	22	—	—	—	—	—	1
Enteritis	103	3	—	—	—	6	14
Appendicitis	31	—	1	—	—	—	1
Ulceration of Intestines	14	—	—	—	—	—	—
Obstruction of Intestines	43	—	1	—	—	1	3



[illegible]

### ORDER 8. OF GENERATIVE SYSTEM.

### A. Diseases of the Reproductive Organs.

Diseases of the Uterus.....	15	---	---	---	---	1	---	1	2
Metritis .....	2	---	---	---	---	1	---	1	1
Disease of Ovaries .....	17	---	---	1	---	---	---	---	1
Disorders of Menstruation .....	4	---	---	---	---	---	1	---	1
Pelvic Abscess .....	2	---	---	---	---	---	---	---	---
Diseases of Testis, Penis, Scrotum, etc.....	5	---	---	---	---	---	---	---	---
<b>B. Diseases of Parturition.</b>									
Abortion and Miscarriage.....	26	---	---	---	---	---	---	---	---
Puerperal Mania .....	1	---	---	---	---	---	---	---	---
Puerperal Convulsions .....	12	1	---	---	---	---	---	1	1
Puerperal Hemorrhage .....	9	---	---	---	---	---	---	---	---
Placenta Previa .....	6	---	---	---	---	---	---	---	---
Other Accidents of Childbirth .....	47	1	---	---	---	1	1	1	4
<b>ORDER 9. OF ORGANS OF LOCOMOTION.</b>									
Caries, Necrosis .....	1	---	---	---	---	---	---	1	1
Arthritis, Periostritis .....	9	---	---	1	---	---	---	---	1

### B. Diseases of Parturition.

[illegible]

## ORDER 9. OF ORGANS OF LOCOMOTION.

Caries, Necrosis .....	1	1	1
Arthritis, Periostitis .....	9	1	1







## RECAPITULATION OF NEW LONDON COUNTY.

CLASSIFIED DISEASES.	NEW LONDON COUNTY.																						Total.
	STATE.	New London.	Bozrah.	Colchester.	East Lyme.	Franklin.	Griswold.	Groton.	Lebanon.	Ledyard.	Lisbon.	Lyme.	Montville.	Norwich.	No. Stonington.	Old Lyme.	Preston.	Salem.	Sprague.	Stonington.	Voluntown.	Waterford.	
All causes -----	14546	274	16	39	35	7	68	84	23	19	14	13	43	437	36	19	42	4	19	127	26	41	1386
<b>Classes.</b>																							
I. Zymotic Diseases -----	2743	29	---	2	5	1	26	8	4	1	1	1	3	69	---	---	7	---	3	8	7	4	179
II. Parasitic Diseases -----	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2
III. Dietetic Diseases -----	62	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IV. Constitutional Diseases -----	2435	49	2	8	6	1	8	14	5	3	1	---	11	90	4	3	7	---	5	27	6	4	254
V. Developmental Diseases -----	939	21	1	2	1	1	8	17	---	1	1	1	3	17	3	3	4	---	---	1	8	3	100
VI. Local Diseases -----	6947	130	11	22	20	4	19	36	12	11	10	9	18	218	25	9	23	4	7	77	8	22	695
VII. Violence -----	712	18	1	2	3	---	3	6	---	---	---	2	1	20	---	2	1	---	1	3	2	3	68
VIII. Ill-defined and cause not stated -----	705	25	1	3	---	---	4	3	2	3	1	---	7	23	4	2	---	---	2	4	---	4	88
<b>Class I.—Orders.</b>																							
1. Miasmatic Diseases -----	1204	8	---	---	---	1	12	3	3	---	1	1	---	27	---	---	4	---	3	3	2	1	69
2. Diarrhoeal Diseases -----	1252	18	---	2	5	---	13	3	1	---	---	3	25	---	---	---	2	---	---	3	4	2	81
3. Malarial Diseases -----	1116	2	---	---	---	---	---	1	---	1	---	---	4	---	---	---	1	---	---	1	---	---	10
4. Zoogenous Diseases -----	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
5. Venereal Diseases -----	24	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---
6. Septic Diseases -----	130	1	---	---	---	---	1	1	---	---	---	---	12	---	---	---	---	---	---	1	1	1	18
Parasitic Diseases -----	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

**Class II.—Orders.**

Parasitic Diseases.....

### Class III.—Orders.

Dietetic Diseases ----- 77 2 ----- 2

### Class IV.—Orders.

Constitutional Diseases ----- 2435 49 2 8 6 1 8 14 5 3 1 --- 11 90 4 3 7 --- 5 27 6 4 254

### Class V.—Orders.

Developmental Diseases ----- 939 21 1 2 1 1 8 17 --- 1 1 3 17 3 3 4 --- 1 8 3 4 100

### Class VI.—Orders.

1. Diseases of Nervous System ----- 1991 32 1 10 --- 3 13 8 2 1 2 6 57 12 3 5 4 1 15 3 5 183  
 2. Organs of Special Sense ----- 8  
 3. Circulatory System ----- 1221 28 1 5 7 --- 5 12 2 6 2 1 3 47 3 2 8 --- 1 17 2 4 156  
 4. Respiratory System ----- 2064 34 9 4 6 2 4 6 1 3 4 3 8 65 5 1 3 --- 3 24 3 9 197  
 5. Digestive System ----- 782 23 --- 2 1 4 --- 2 --- 1 27 --- 1 2 --- 1 14 2 80  
 6. Lymph. Sys. and Ductless Glands ----- 13 1 --- --- --- --- --- --- --- --- --- --- --- --- 1  
 7. Urinary System ----- 696 11 --- 3 4 1 3 3 1 --- 1 3 --- 20 2 1 5 --- 5 --- 2 65  
 8. Generative System ----- 146 1 --- 1 --- 1 --- 2 2 1 --- 1 --- 1 --- 10  
 9. Organs of Locomotion ----- 10 --- 1 --- --- --- --- --- --- --- --- --- --- 2  
 10. Integumentary System ----- 16 --- --- --- --- --- --- --- --- --- --- --- --- 1

### Class VII.—Orders.

1. Accident or Negligence ----- 597 15 1 1 3 --- 3 6 --- 1 --- 19 --- 2 1 --- 3 1 2 58  
 2. Homicide ----- 8  
 3. Suicide ----- 107 3 1 --- --- --- --- --- --- --- --- --- --- 1 --- 1 1 10  
 4. Execution ----- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

### Class VIII.—Orders.

1. Ill-defined ----- 683 25 1 3 --- 4 3 2 3 --- 7 23 3 2 --- 2 4 --- 4 86  
 2. Cause not stated ----- 22 --- --- --- --- --- --- --- --- --- --- --- --- --- --- 2



## ORDER 2. DIARRHOEAL.

[illegible]

## Class II.—Parasitic Diseases.

Thrush.....33

TABLE VI—CONTINUED. FAIRFIELD COUNTY.

CAUSES OF DEATH.		STATE.	Danbury.	Bridgport.	Bethel.	Brookfield.	Darien.	Easton.	Fairfield.	Greenwich.	Huntington.	Monroe.	New Canaan.	New Fairfield	Newtown.	Norwalk.	Reading.	Ridgefield.	Sherman.	Stratford.	Trumbull.	Weston.	Westport.	Willon.	TOTAL.
Class III.—Dietetic Diseases.																									
Starvation	-----	4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	1
Intemperance	-----	10	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	2
Chronic Alcoholism	-----	41	3	2	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	8
Delirium Tremens	-----	3	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1
Other Dietetic Diseases	-----	4	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1
Class IV.—Constitutional Diseases.																									
Rheumatism	-----	91	1	8	-----	1	1	-----	-----	1	3	-----	2	-----	-----	-----	-----	1	-----	5	-----	-----	-----	2	25
Gout	-----	2	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1
Rickets	-----	9	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	3
Cancer not located	-----	97	5	3	-----	-----	-----	-----	2	4	1	-----	-----	-----	-----	1	1	-----	3	-----	-----	-----	-----	-----	23
Cancer of Breast	-----	62	2	4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	9
Cancer of Stomach	-----	107	2	4	1	-----	-----	1	1	2	-----	-----	-----	-----	-----	3	1	-----	4	-----	-----	-----	-----	-----	20
Cancer of Womb	-----	73	1	10	-----	1	-----	-----	-----	2	1	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	16
Cancer of other Organs	-----	132	4	9	-----	-----	2	-----	1	5	-----	-----	-----	-----	-----	1	1	1	1	1	2	-----	-----	-----	23
Tabes Mesenterica	-----	117	7	10	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	15	-----	-----	-----	-----	-----	39
Tubercular Meningitis	-----	84	6	13	-----	-----	-----	-----	-----	2	-----	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	27
Phthisis	-----	1358	34	108	4	2	7	3	4	17	10	2	6	-----	2	30	2	5	34	3	2	-----	12	4	291



Other forms of Tuberculosis.....	151	1	24	---	---	---	3	1	3	1	---	5	---	---	3	2	3	6	---	52
Scrofula.....	11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
Pott's Disease.....	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	1
Hip-Joint Disease.....	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	2
Purpura.....	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12
Anemia.....	49	1	6	1	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11
Diabetes.....	71	2	4	---	---	---	---	---	1	---	---	---	---	---	---	2	---	1	---	1
Other Constitutional Diseases.....	3	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	1

## Class V.—Developmental Diseases.

Premature Birth.....	285	11	23	4	---	2	---	1	1	7	---	2	---	---	---	6	2	---	1	60
Atelectasis.....	23	---	---	---	---	---	---	---	1	1	---	---	---	---	---	---	---	---	---	2
Cyanosis.....	25	---	1	1	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	4
Spina Bifida.....	16	---	4	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	5
Imperforate Anus.....	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
Cleft Palate, Hare Lip.....	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	7
Other Congenital Malformations.....	27	2	3	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	5
Umbilical Hemorrhage.....	11	2	---	---	---	---	---	1	1	---	---	6	1	---	2	7	2	9	1	88
Old Age.....	546	7	31	8	---	4	2	2	5	---	---	---	---	---	---	---	---	---	---	---

## Class VI.—Local Diseases.

## ORDER 1. OF NERVOUS SYSTEM.

Inflammation of Brain or its Membranes	303	3	29	2	---	---	---	4	3	3	---	---	---	1	8	2	---	4	1	2	62
Apoplexy	689	18	41	1	2	4	---	3	15	3	---	3	---	4	13	2	5	18	4	2	147
Softening of Brain	71	---	2	1	---	---	---	---	3	---	---	---	---	---	6	2	---	4	2	1	21
Hydrocephalus, not acute	22	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	1	---	---	3
Hemiplegia	49	1	---	---	---	---	---	---	1	---	1	1	1	---	2	---	---	1	---	10	
Paralysis Agitans	31	4	---	1	---	3	---	---	---	2	---	1	---	---	2	---	---	---	1	---	9

TABLE VI—CONTINUED. FAIRFIELD COUNTY.

CAUSES OF DEATH.																								
STATE.	Danbury.	Bridgport.	Bethel.	Brookfield.	Darien.	Easton.	Fairfield.	Greenwich.	Huntington.	Monroe.	New Canaan.	New Fairfield.	Newtown.	Norwalk.	Redding.	Ridgefield.	Sherman.	Stamford.	Stratford.	Trumbull.	Weston.	Westport.	Wilton.	TOTAL.
Insanity	56	2			1					1				1	1			1	1			2		9
Chorea	3																							
Epilepsy	64	2		1				2		1				1	1			1	1					11
Convulsions	327	4	35	1	1	2	1	4	2		2	1	1	7	1	1	7	1			1			72
Trismus Nascentium	10																							
Tetanus	23	1															1							3
Paraplegia	5																							4
Diseases of Spinal Cord	17		2					1										1						4
Myelitis	19		2																					2
Spinal Meningitis	48		3				1				1			1										6
Locomotor Ataxia	13		2		2										1		1							6
Other Diseases of Nervous System	241	4	19	2	1		4	2	1					8				3	1	1				46
ORDER 2. OF ORGANS OF SPECIAL SENSE.																								
Epistaxis	2								1															1
Otitis	4		1																			1		2
Other Diseases of Eye, Ear or Nose	2		1												1									1
ORDER 3. OF CIRCULATORY SYSTEM.																								
Endocarditis	124	7	34				1				1		2	6			1					2		54
Valvular Disease of Heart	254	7	14	4		6	2	7	1	1				2			5	3	2				2	58
Disease of Heart	549	14	5	4	1	1	11	1	2		7	2	6	19	2	2	2	3	1			3	7	91
Pericarditis	22	1						1								3			1				1	7

	67	3	6						2	3	14
Angina Pectoris	7		1								1
Syncope	8										
Aneurism	34		1	1					1		1
Senile Gangrene	36	1	1						1		4
Thrombosis, Embolism	4										
Phlebitis	116	1	3	6					2	16	33
Other Diseases of Circulatory System											
ORDER 4. OF RESPIRATORY SYSTEM.											
Laryngitis	35	3	6						1		11
Catarrhal Croup	7		1								1
Other Diseases of Larynx or Trachea	3										
Emphysema, Asthma	61	2	4						1		13
Bronchitis	539	11	30	1	1				1	11	90
Pneumonia	1289	27	83	3	1	4	1	11	2	5	224
Pleurisy	44		4						1	4	10
Other Diseases of Respiratory System	86	1	13					3	2	1	24
ORDER 5. OF DIGESTIVE SYSTEM.											
Stomatitis	10		1								1
Dentition	38	1	14					1			16
Quinsy	10										
Dyspepsia	15	1	1								2
Hæmatemesis	8		1								1
Disease of Stomach	134	3	25	1	1			1	1	2	40
Ulcer of Stomach	22		3						5	2	5
Enteritis	103	3	10						1	2	21
Appendicitis	31	1						1	2	2	6
Ulceration of Intestines	14		1							1	3
Obstruction of Intestines	43	2	3							3	10

## ORDER 5. OF DIGESTIVE SYSTEM.

Stomatitis	10	1	1	1	1	1	1
Dentition	38	1	14	1	1	1	16
Quinsy	10						2
Dyspepsia	15	1	1				1
Hæmatemesis	8	1	1	1	1	1	1
Disease of Stomach	134	3	25	1	1	1	2
Ulcer of Stomach	22	3					2
Enteritis	103	3	10			5	21
Appendicitis	31	1		1		2	6
Ulceration of Intestines	14	1	1			1	3
Obstruction of Intestines	43	2	3	1	1	1	10

TABLE VI—CONTINUED. FAIRFIELD COUNTY.

CAUSES OF DEATH.																								
STATE.	Danbury.	Bridgeport.	Bethel.	Brookfield.	Darien.	Easton.	Fairfield.	Greenwich.	Huntington.	Monroe.	New Canaan.	New Fairfield.	Newtown.	Norwalk.	Redding.	Ridgefield.	Sherman.	Stamford.	Stratford.	Trumbull.	Weston.	Westport.	Wilton.	TOTAL.
Strangulation of Intestines.....	4													1	1									1
Intussusception of Intestines.....	6		2																		1			3
Hernia.....	29	1	5												1	1	1							9
Fistula.....	5																							
Pertinitis (not puerperal).....	129	2	9	1	1	1	1	2						1	1	1					1			19
Ascites.....	7																1							1
Gallstones.....	5																							
Cirrhosis of Liver.....	71	3	5		1			2			1						3			1		1		16
Hepatitis.....	29		1											1						1				3
Jaundice.....	2																							
Other Diseases of Liver.....	46		4	3				3				1		1								1		13
Other Diseases of Digestive System.....	24	1	1														1					1		4
ORDER 6. OF LYMPHATIC SYSTEM AND DUCTLESS GLANDS.																								
Addison's Disease.....	4		1																					1
Disease of Spleen.....	1																							
Bronchocele.....	1																							
Diseases of Lymphatic System.....	7																							
ORDER 7. OF URINARY SYSTEM.																								
Nephritis.....	231	4	21	2			1	4			2		1	3		2		8	1			1	1	51
Bright's Disease.....	306	5	18	2		2	3	4	5		1		1	9	4		5	2				2	1	64

[illegible]

## ORDER 8. OF GENERATIVE SYSTEM.

### A. Diseases of the Reproductive Organs.

[illegible]

### B. Diseases of Parturition.

Abortion and Miscarriage	26	3	1	1	1	1	1
Puerperal Mania	1						
Puerperal Convulsions	12						
Puerperal Hæmorrhage	9						
Placenta Previa	6	2					
Other Accidents of Childbirth	47	2	3	2	2	2	11

## ORDER 9. OF ORGANS OF LOCOMOTION.

Caries, Necrosis	1	1	4
Arthritis, Periostritis	9	1	4







## RECAPITULATION OF FAIRFIELD COUNTY.

CLASSIFIED DISEASES.	STATE.																							TOTAL.	
	Danbury.	Bridgeport.	Bethel.	Brookfield.	Darien.	Easton.	Fairfield.	Greenwich.	Huntington.	Monroe.	New Canaan.	New Fairfield.	Newtown.	Norwalk.	Redding.	Ridgefield.	Sherman.	Stamford.	Stratford.	Trumbull.	Weston.	Westport.	Wilton.		
All causes -----	14546	344	1044	59	20	65	24	71	213	70	22	54	10	36	362	24	56	10	389	42	22	15	76	41	3069
<b>Classes.</b>																									
I. Zymotic Diseases -----	2743	71	199	6	4	6	3	9	51	13	3	5	3	2	107	--	6	1	103	4	2	4	23	13	638
II. Parasitic Diseases -----	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1
III. Diabetic Diseases -----	62	3	3	--	--	--	1	--	2	--	--	--	--	--	1	--	1	--	1	--	--	--	1	--	13
IV. Constitutional Diseases -----	2435	66	204	6	6	12	7	9	40	15	5	13	3	46	5	15	--	70	4	4	1	17	9	557	
V. Developmental Diseases -----	939	22	62	13	1	6	2	4	8	6	3	6	3	2	17	2	2	10	1	1	1	1	1	--	172
VI. Local Diseases -----	6947	150	494	29	9	38	10	37	91	25	8	31	7	22	158	17	27	6	156	26	13	9	32	19	1444
VII. Violence -----	712	18	43	1	--	3	--	7	14	4	--	1	6	23	--	2	2	29	2	--	--	--	--	--	155
VIII. Ill-defined and cause not stated -----	705	14	39	4	--	--	1	5	7	5	--	1	--	1	10	--	3	1	19	5	2	--	2	--	119
<b>Class I.—Orders.</b>																									
1. Miasmatic Diseases -----	1201	34	100	1	2	4	3	3	19	5	2	2	2	24	--	2	1	47	3	2	1	7	8	--	272
2. Diarrhoeal Diseases -----	1252	35	72	3	1	1	--	5	25	8	1	2	2	65	--	4	--	45	1	--	2	14	5	--	291
3. Malarial Diseases -----	116	--	6	2	--	--	--	1	1	--	--	--	--	13	--	--	--	5	--	--	--	2	--	--	30
4. Zoogenous Diseases -----	2	1	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	2
5. Venereal Diseases -----	24	--	7	--	--	--	--	--	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9
6. Septic Diseases -----	130	1	14	--	1	1	--	--	4	--	--	1	--	5	--	--	--	6	--	1	--	--	--	--	34
<b>Class II.—Orders.</b>																									
Parasitic Diseases -----	3	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	1







ORDER 2. DIARRHOEAL.																	
Cholera Infantum	660	1	---	---	---	1	---	3	8	2	4	---	4	7	14	1	45
Infantile Diarrhoea	229	2	---	---	---	---	---	1	3	---	1	---	---	---	---	2	9
Cholera Morbus	40	---	---	---	---	---	---	---	1	---	---	---	---	1	---	---	2
Dysentery	177	---	1	---	---	---	---	1	1	---	1	---	1	4	17	---	26
Diarrhoea	146	2	---	---	---	---	---	1	2	---	13	---	---	5	3	---	26
ORDER 3. MALARIAL.																	
Intermittent Fever	24	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1
Remittent Fever	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pernicious or Congestive Fever	13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Other Malarial Diseases	69	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	1
ORDER 4. ZOOGENOUS.																	
Hydrophobia	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ORDER 5. VENEREAL.																	
Syphilis	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Gonorrhoea, Stricture of Urethra	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ORDER 6. SEPTIC.																	
Erysipelas	36	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Pyæmia, Septicæmia	51	---	---	---	---	---	---	---	---	---	---	---	---	1	2	---	3
Puerperal Fever	43	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1
Thrush	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Class II.—Parasitic Diseases.

TABLE VI—CONTINUED. WINDHAM COUNTY.

CAUSES OF DEATH.	WINDHAM COUNTY.																TOTAL.
	STATE.	Brooklyn.	Ashford.	Canterbury.	Chaplin.	Eastford.	Hampton.	Killingly.	Plainfield.	Powtrett.	Putnam.	Scotland.	Sterling.	Thompson.	Windham.	Woodstock.	
<b>Class III.—Dietetic Diseases.</b>																	
Starvation	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Intemperance	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chronic Alcoholism	41	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—	1
Delirium Tremens	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Other Dietetic Diseases	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Class IV.—Constitutional Diseases.</b>																	
Rheumatism	91	—	—	—	—	—	—	—	1	1	3	—	—	1	—	—	6
Gout	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rickets	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cancer not located	97	—	—	—	—	—	—	—	—	—	—	—	1	3	—	1	5
Cancer of Breast	62	—	—	—	—	—	—	—	1	—	—	—	—	—	2	—	3
Cancer of Stomach	107	—	—	1	—	—	3	—	—	—	—	—	—	—	—	—	4
Cancer of Womb	73	—	—	—	—	—	—	—	—	1	2	—	—	1	3	—	6
Cancer of other Organs	132	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	3
Tabes Mesenterica	117	—	—	—	—	—	—	—	2	—	—	—	—	2	—	—	6
Tubercular Meningitis, Acute Hydroceph.	84	—	—	—	—	—	—	2	—	—	3	—	—	—	2	—	7
Phtisis	1358	7	1	5	1	1	10	5	5	2	7	—	—	7	19	4	69



TABLE VI—CONTINUED. WINDHAM COUNTY.

CAUSES OF DEATH.	LOCALITIES.																TOTAL.
	STATE.	Brooklyn.	Ashford.	Canterbury.	Chaplin.	Eastford.	Hampton.	Killingly.	Plainfield.	Pomfret.	Putnam.	Scotland.	Sterling.	Thompson.	Windham.	Woodstock.	
Insanity	56	1															1
Chorea	3																5
Epilepsy	64	1		1							1				2		5
Convulsions	327	4						4	1		1			5	6		21
Trismus Nascentium	10																
Tetanus	23																
Paraplegia	5									1							1
Diseases of Spinal Cord	17													1			1
Myelitis	19																
Spinal Meningitis	48	1						5			1		1				8
Locomotor Ataxia	13									1							1
Other Diseases of Nervous System	241	2							2					2	4	2	12
ORDER 2. OF ORGANS OF SPECIAL SENSE.																	
Epistaxis	2																
Otitis	4																
Other Diseases of Eye, Ear or Nose	2																
ORDER 3. OF CIRCULATORY SYSTEM.																	
Endocarditis	124				1										1	2	4
Valvular Disease of Heart	254		1					2							4		7
Disease of Heart	549		2	1			1	6	2	4	8		2	2		2	30
Pericarditis	22							1			1						2

Angina Pectoris	67	---	---	---	---	1	---	1	1	1	---	1	---	5
Syncope	7	---	---	---	---	---	---	---	---	---	---	---	---	---
Aneurism	8	1	---	---	---	---	---	---	---	---	---	---	---	1
Senile Gangrene	34	---	---	---	---	1	---	---	---	---	---	---	---	1
Thrombosis, Embolism	36	---	---	---	---	---	---	---	1	---	3	---	---	4
Phlebitis	4	---	---	---	---	---	---	---	---	---	---	1	---	1
Other Diseases of Circulatory System	116	1	---	---	---	1	---	---	1	---	2	5	---	10

## ORDER 4. OF RESPIRATORY SYSTEM.

Laryngitis	35	---	---	---	---	---	1	---	---	---	1	---	---	2
Catarrhal Croup	7	---	---	---	---	---	---	---	---	---	---	---	---	---
Other Diseases of Larynx or Trachea	3	---	---	---	---	1	---	---	---	---	---	---	---	1
Emphysema, Asthma	61	---	---	---	---	---	---	1	---	---	2	---	---	4
Bronchitis	539	1	1	2	1	2	4	3	1	9	1	3	19	47
Pneumonia	1289	3	3	1	2	1	19	15	7	15	3	13	20	105
Pleurisy	44	---	---	---	---	---	---	---	1	---	---	---	---	2
Other Diseases of Respiratory System	86	---	---	---	---	---	---	---	1	---	---	1	---	2

## ORDER 5. OF DIGESTIVE SYSTEM.

Stomatitis	10	---	---	---	---	---	---	---	---	---	---	---	---	---
Dentition	38	---	---	---	---	1	---	---	1	---	---	---	---	2
Quinsy	10	---	---	---	---	---	---	---	---	---	---	---	---	---
Dyspepsia	15	---	---	---	---	---	---	---	---	---	---	---	---	1
Hæmatemesis	8	---	---	---	---	---	---	---	---	---	---	---	---	---
Disease of Stomach	134	1	---	1	---	2	---	---	1	1	---	---	---	7
Ulcer of Stomach	22	---	1	---	---	---	---	---	---	---	---	---	---	1
Enteritis	103	1	---	---	---	1	---	---	1	---	---	4	2	9
Appendicitis	31	---	---	---	---	---	---	---	---	---	---	---	---	---
Ulceration of Intestines	14	---	---	---	---	---	---	---	---	---	---	---	---	---
Obstruction of Intestines	43	---	---	---	---	1	---	---	1	---	---	---	---	2



TABLE VI—CONTINUED. WINDHAM COUNTY.

CAUSES OF DEATH.	LOCALITIES.																Total.
	STATE.	Brooklyn.	Ashford.	Canterbury.	Chaplin.	Eastford.	Hampton.	Killingly.	Plainfield.	Pomfret.	Putnam.	Scotland.	Sterling.	Thompson.	Windham.	Woodstock.	
Strangulation of Intestines	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Intussusception of Intestines	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hernia	29	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Fistula	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Peritonitis (not puerperal)	129	—	—	—	1	—	—	—	—	—	4	—	—	1	5	—	11
Ascites	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gallstones	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cirrhosis of Liver	71	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	4
Hepatitis	29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Jaundice	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases of Liver	46	1	—	—	—	—	—	1	—	—	—	—	—	1	—	—	3
Other Diseases of Digestive System	24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
ORDER 6. OF LYMPHATIC SYSTEM AND DUCTLESS GLANDS.																	
Addison's Disease	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Disease of Spleen	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Bronchocele.	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Lymphatic System	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ORDER 7. OF URINARY SYSTEM.																	
Nephritis	231	1	1	—	—	—	—	1	—	4	3	—	—	—	2	—	12
Bright's Disease	306	1	—	1	—	—	—	3	1	1	2	—	—	1	7	1	18

Uremia	58	1	1	1	1	1	1	1	3
Suppression of Urine	3	---	---	---	---	---	---	---	---
Calculus	5	---	---	---	---	---	---	---	---
Hæmaturia	4	---	---	---	---	---	---	---	---
Disease of Bladder	66	1	2	1	1	1	1	1	6
Prostatitis	13	---	---	---	---	---	---	---	1
Other Diseases of Urinary System	10	---	---	---	---	---	---	1	2

## ORDER 8. OF GENERATIVE SYSTEM.

A. *Diseases of the Reproductive Organs.*

Diseases of the Uterus	15	---	---	---	---	---	---	1	2
Metritis	2	---	---	---	---	---	---	---	---
Disease of Ovaries	17	2	---	---	---	---	---	---	4
Disorders of Menstruation	4	---	---	---	---	---	---	---	---
Pelvic Abscess	2	---	---	---	---	---	---	---	---
Diseases of Testis, Penis, Scrotum, etc.,	5	---	---	---	---	---	---	---	---

B. *Diseases of Parturition.*

Abortion and Miscarriage	26	---	---	---	---	---	---	---	---
Puerperal Mania	1	---	---	---	---	---	---	---	---
Puerperal Convulsions	12	---	1	---	---	---	---	---	1
Puerperal Hæmorrhage	9	---	---	---	---	---	---	---	---
Placenta Previa	6	---	---	---	---	---	---	---	---
Other Accidents of Childbirth	47	---	---	---	---	---	---	---	---

## ORDER 9. OF ORGANS OF LOCOMOTION.

Caries, Necrosis	1	---	---	---	---	---	---	---	---
Arthritis, Periostitis	9	---	---	---	---	---	---	1	1





## RECAPITULATION OF WINDHAM COUNTY.

CLASSIFIED DISEASES.	STATE.															Total.
	Brooklyn.	Ashford.	Canterbury.	Chaplin.	Eastford.	Hampton.	Killingly.	Plainfield.	Pomfret.	Putnam.	Scotland.	Sterling.	Thompson.	Windham.	Woodstock.	
All causes	14546	23	21	10	13	11	117	84	41	134	9	21	116	220	50	914
Classes.																
I. Zymotic Diseases	2743	4	1		3		13	23	5	34	2	7	32	48	12	193
II. Parasitic Diseases	3															
III. Dietetic Diseases	62							1						2		3
IV. Constitutional Diseases	2435	1	6	1	1	1	19	11	4	23		2	21	32	9	138
V. Developmental Diseases	939	1	2	1	1	1	9	2	1	7	2	1	5	6	5	44
VI. Local Diseases	6947	24	13	8	5	6	66	40	27	63	4	11	44	110	22	451
VII. Violence	712	2	1	1			8		4	4			5	7	2	35
VIII. Ill-defined and cause not stated	705	1	2	4	3	3	2	7		3	1		9	15		50
Class I.—Orders.																
1. Miasmatic Diseases	1204	3	4		2		7	8	3	15	2	1	13	12	9	79
2. Diarrhoeal Diseases	1252	5	1		1		6	15	2	19		5	17	34	3	108
3. Malarial Diseases	116	1											1			2
4. Zoogenous Diseases	2															
5. Venereal Diseases	24															
6. Septic Diseases	130											1	1	2		4
Parasitic Diseases	3															

**Class II.—Orders.**

Parasitic Diseases



### Class III.—Orders.

Dietetic Diseases

3

### Class IV.—Orders.

Constitutional Diseases

138

### Class V.—Orders.

Developmental Diseases

44

### Class VI.—Orders.

1. Diseases of Nervous System

2. Organs of Special Sense

3. Circulatory System

4. Respiratory System

5. Digestive System

6. Lymph. Sys. and Ductless Glands

7. Urinary System

8. Generative System

9. Organs of Locomotion

10. Integumentary System

1991	14	2	5	1	1	1	19	12	5	7	1	2	16	33	8	127
8																
1221	1	4	1	1			1	12	2	5	1	2	7	12	4	65
2064	4	4		3	3	3	24	20	10	24		7	16	40	5	163
782	1	2	1	2	1		6	3	1	8	1		2	11	4	43
13														1		1
696	2	1	1	1		1	4	3	6	8	1		2	11	1	42
146	2						1			1		1	1	2		7
10										1						1
16										2						2

### Class VII.—Orders.

1. Accident or Negligence

2. Homicide

3. Suicide

4. Execution

597	2		1				7		4	1			5	5	2	27
8																
107		1		1			1			3				2		8

### Class VIII.—Orders.

1. Ill-defined

2. Cause not stated

683	1	2	4		3	3	2	7		3	1		7	15		48
22													2			2



## ORDER 2. DIARRHOEAL.

[illegible]

### ORDER 3. MALARIAL.

	CASES.	%	TOTAL.
Intermittent Fever.....	24	1	1
Remittent Fever.....	10	1	1
Pernicious or Congestive Fever.....	13	3	1
Other Malarial Diseases.....	69	-	4
			----

## ORDER 4. ZOGENOUS.

NAME	AGE	SEX	DATE	TIME	PLACE	REMARKS
Hydrophobia	2					

## ORDER 5. VENEREAL.

Syphilis	20
Gonorrhoea, Stricture of Urethra	4

### ORDER 6. SEPTIC.

	Case	No.	Sex	Age	Date	Diagnosis	Duration	Outcome
Erysipelas	36	-	-	-	-	-	-	2
Pyæmia, Septicæmia	51	-	-	-	-	-	1	2
Puerperal Fever	43	-	-	-	-	-	1	1

## Class II.—Parasitic Diseases.

Thrush

TABLE VI—CONTINUED. LITCHFIELD COUNTY.

CAUSES OF DEATH.	Litchfield.																									STATE.	
	Barkhamsted.	Bethlehem.	Bridgewater.	Canaan.	Colebrook.	Cornwall.	Goshen.	Harwinton.	Kent.	Morris.	New Hartford.	New Milford.	Norfolk.	North Canaan.	Plymouth.	Roxbury.	Salisbury.	Sharon.	Thomaston.	Torrington.	Warren.	Washington.	Watertown.	Winchester.	Woodbury.		
Class III.—Dietetic Diseases.																											
Starvation	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	
Intemperance	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Chronic Alcoholism	41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	
Delirium Tremens	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Other Dietetic Diseases	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	
Class IV.—Constitutional Diseases.																											
Rheumatism	91	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	4	
Gout	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	
Rickets	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cancer not located	97	—	—	—	1	—	—	—	—	—	—	—	1	—	—	1	2	—	—	2	—	1	—	—	—	—	
Cancer of Breast	62	1	—	—	—	—	—	—	2	—	1	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	
Cancer of Stomach	107	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	
Cancer of Womb	73	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cancer of other Organs	132	5	—	1	—	2	1	—	1	—	—	—	—	1	—	—	1	1	2	—	—	—	—	—	—	2	
Tabes Mesenterica	117	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	1	
Tubercular Meningitis, Acute Hydroceph.	84	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	
Phthisis	1358	4	—	2	—	—	1	1	2	2	5	7	2	2	1	—	3	1	3	6	—	2	2	8	—	—	55







[illegible]

## ORDER 5. OF DIGESTIVE SYSTEM.

[illegible]

TABLE VI.—CONTINUED. LITCHFIELD COUNTY.

CAUSES OF DEATH.	LITCHFIELD COUNTY.																									STATE.		
	Litchfield.	Barkhamsted.	Bethlehem.	Bridgewater.	Canaan.	Colebrook.	Cornwall.	Goshen.	Harwinton.	Kent.	Morris.	New Hartford.	New Milford.	Norfolk.	North Canaan.	Plymouth.	Roxbury.	Salisbury.	Sharon.	Thomaston.	Torrington.	Warren.	Washington.	Watertown.	Winchester.	Woodbury.	TOTAL.	
Strangulation of Intestines.....	4	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
Intussusception of Intestines.....	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
Hernia.....	29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
Fistula.....	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
Peritonitis (not puerperal).....	129	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	3	2	—	—	—	—	—	—	—	—	8	
Ascites.....	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Gallstones.....	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cirrhosis of Liver.....	71	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	2	—	—	—	—	—	6	
Hepatitis.....	29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	
Jaundice.....	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Other Diseases of Liver.....	46	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	4	
Other Diseases of Digestive System.....	24	—	—	—	—	—	1	—	—	—	—	1	—	—	1	—	—	—	—	—	—	1	—	—	—	—	4	
ORDER 6. OF LYMPHATIC SYSTEM AND DUCTLESS GLANDS.																												
Addison's Disease.....	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Disease of Spleen.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Bronchocele.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Diseases of Lymphatic System.....	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
ORDER 7. OF URINARY SYSTEM.																												
Nephritis.....	231	5	1	1	1	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	1	—	—	1	2	—	13	
Bright's Disease.....	306	—	—	1	1	1	—	1	3	2	—	—	—	—	—	—	—	—	1	1	4	1	—	3	—	—	20	

[illegible]

### ORDER 8. OF GENERATIVE SYSTEM.

### A. Diseases of the Reproductive Organs.

Diseases of the Uterus.....	15	1	1	1	1
Metritis .....	2				2
Disease of Ovaries .....	17		1		1
Disorders of Menstruation .....	4				
Pelvic Abscess .....	2				
Diseases of Testis, Penis, Scrotum, etc.....	5				
<i>B. Diseases of Parturition.</i>					
Abortion and Miscarriage.....	26		1	1	2
Puerperal Mania .....	1				3
Puerperal Convulsions .....	12		1		2
Puerperal Hæmorrhage .....	9		1		1
Placenta Previa .....	6				
Other Accidents of Childbirth .....	47			1	1
ORDER 9. OF ORGANS OF LOCOMOTION.					
Caries, Necrosis .....	1				
Arthritis, Periostitis .....	9				

### B. Diseases of Parturition.

[illegible]

## ORDER 9. OF ORGANS OF LOCOMOTION.

Caries, Necrosis	1	-----
Arthritis, Periostritis	9	-----









### Class III.—Orders.

## Dietetic Diseases

### Class IV.—Orders.

## Constitutional Diseases

## Class V.—Orders.

## Developmental Diseases

## Class VI.—Orders.

1. Diseases of Nervous System .....
2.   Organs of Special Sense.....
3.   Circulatory System .....
4.   Respiratory System.....
5.   Digestive System.....
6.   Lymph. Sys. and Ductless Glands.....
7.   Urinary System.....
8.   Generative System .....
9.   Organs of Locomotion.....
10.   Integumentary System .....

[illegible]

## Class VII.—Orders.

1. Accident or Negligence .....
2. Homicide .....
3. Suicide .....
4. Execution .....

[illegible]

## Class VIII.—Orders.

1. Ill-defined -----
2. Cause not stated

[illegible]

TABLE VI—Continued.

## MIDDLESEX COUNTY.

CAUSES OF DEATH.	STATE.	Middletown.	Haddam.	Chatham.	Chester.	Clinton.	Cromwell.	Durham.	East Haddam.	Essex.	Killingworth.	Middlefield.	Old Saybrook.	Portland.	Saybrook.	Westbrook.	TOTAL.
<b>Class 1.—Zymotic Diseases.</b>																	
<b>ORDER 1. MIASMATIC.</b>																	
Small Pox .....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Varicoid .....	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chicken Pox .....	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles .....	26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scarlet Fever .....	65	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Influenza .....	275	2	4	1	—	—	—	1	—	—	—	1	2	—	—	—	10
Typhoid Fever .....	259	2	2	—	—	—	—	—	—	—	—	—	—	1	—	—	6
Cerebro-Spinal Fever .....	41	2	—	—	—	—	1	—	—	—	—	—	—	—	—	—	4
Continued Fever .....	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough .....	127	4	—	—	—	—	—	—	—	—	—	—	—	2	—	—	6
Diphtheria .....	262	4	3	—	—	1	—	—	—	—	—	—	—	3	—	—	11
Membranous Group .....	126	4	1	—	—	—	—	—	—	1	—	—	—	—	—	—	6
Other Miasmatic Diseases .....	7	1	—	—	—	—	—	—	1	—	—	—	—	1	—	—	3

[illegible]

## Class II.—Parasitic Diseases.

## Thrush



TABLE VI—CONTINUED. MIDDLESEX COUNTY.

CAUSES OF DEATH.	MIDDLESEX COUNTY.																	TOTAL.
	STATE.	Middletown.	Haddam.	Chatham.	Chester.	Clinton.	Cromwell.	Durham.	East Haddam.	Essex.	Killingworth.	Middlefield.	Old Saybrook.	Portland.	Saybrook.	Westbrook.		
Class III.—Dietetic Diseases.																		
Starvation	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Intemperance	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Chronic Alcoholism	41	1	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	
Delirium Tremens	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Other Dietetic Diseases	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Class IV.—Constitutional Diseases.																		
Rheumatism	91	—	—	—	—	—	—	—	1	1	—	—	—	1	—	—	2	
Gout	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Rickets	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Cancer not located	97	4	—	—	1	—	—	—	—	2	—	1	—	1	2	—	10	
Cancer of Breast	62	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	
Cancer of Stomach	107	2	—	1	—	—	—	—	—	—	—	—	—	2	—	—	5	
Cancer of Womb	73	2	—	—	—	—	—	—	—	—	—	—	—	1	—	—	3	
Cancer of other Organs	132	2	—	—	—	—	—	—	4	—	—	—	—	—	—	—	6	
Tabes Mesenterica	117	4	—	—	—	1	—	—	—	—	—	—	—	—	1	—	6	
Tubercular Meningitis, Acute Hydroceph	84	5	—	—	—	—	—	—	—	—	—	—	—	—	1	—	7	
Phthisis	1358	51	4	5	—	1	4	1	—	2	—	1	1	8	2	—	80	

	151	7	3		4	1	3	18
Other forms of Tuberculosis								
Scrofula	11	1						1
Pott's Disease	8							
Hip-Joint Disease	4				4			
Purpura	6							
Anaemia	49							
Diabetes	71	3	1					5
Other Constitutional Diseases	3				3			

### Class V.—Developmental Diseases.

Premature Birth	285	3		1	2	1	1	1	6	1	14
Atelectasis	23										--
Cyanosis	25										--
Spina Bifida	16										--
Imperforate Anus	1										--
Cleft Palate, Hare Lip	5										--
Other Congenital malformations	27										--
Umbilical Hemorrhage	11										--
Old Age	546	14	3	1	2	1	8	3	1	1	37

### Class VI.—Local Diseases.

## ORDER 1. OF NERVOUS SYSTEM.

[illegible]



[illegible]

## ORDER 5. OF DIGESTIVE SYSTEM.

[illegible]

TABLE VI—CONTINUED. MIDDLESEX COUNTY.

CAUSES OF DEATH.																	
	STATE.	Middletown.	Haddam.	Chatham.	Chester.	Clinton.	Cromwell.	Durham.	East Haddam.	Essex.	Killingworth.	Middlefield.	Old Saybrook.	Portland.	Saybrook.	Westbrook.	Total.
Strangulation of Intestines.....	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Intussusception of Intestines.....	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hernia.....	29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fistula.....	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Peritonitis (not puerperal).....	129	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	2
Ascites.....	7	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Gallstones.....	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cirrhosis of Liver.....	71	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Hepatitis.....	29	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	2
Jaundice.....	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Diseases of Liver.....	46	2	—	—	—	—	—	—	—	1	—	—	—	—	—	—	2
Other Diseases of Digestive System.....	24	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	2
ORDER 6. OF LYMPHATIC SYSTEM AND DUCTLESS GLANDS.																	
Addison's Disease.....	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Disease of Spleen.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bronchocele.....	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diseases of Lymphatic System.....	7	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1
ORDER 7. OF URINARY SYSTEM.																	
Nephritis.....	231	5	—	—	—	2	2	—	2	2	—	—	1	1	1	—	9
Bright's Disease.....	306	3	1	—	—	2	2	—	—	2	2	—	—	—	—	—	13



	1	2	3	4
Uremia	58	1	1	4
Suppression of Urine	3			3
Calculus	5			
Hæmaturia	4			
Disease of Bladder	66	1	1	3
Prostatitis	13			1
Other Diseases of Urinary System	10			

### ORDER 8. OF GENERATIVE SYSTEM.

### A. Diseases of the Reproductive Organs.

Diseases of the Uterus	15	-	-	-	-	-
Metritis	2	-	-	-	-	-
Disease of Ovaries	17	-	-	1	-	-
Disorders of Menstruation	4	-	-	-	-	1
Pelvic Abscess	2	-	-	-	-	2
Diseases of Testis, Penis, Scrotum, etc.	5	-	-	-	-	2

### B. Diseases of Parturition.

Abortion and Miscarriage	26	1	1	1
Puerperal Mania	1	1	1	1
Puerperal Convulsions	12	1	1	1
Puerperal Hæmorrhage	9	1	1	1
Placenta Previa	6	1	1	1
Other Accidents of Childbirth	47	1	1	1

## ORDER 9. OF ORGANS OF LOCOMOTION.

[illegible]













## ORDER 2. DIARRHŒAL.

[illegible]

### ORDER 3. MALARIAL.

Intermittent Fever	24	10	13	69
Remittent Fever	10	10	13	69
Pernicious or Congestive Fever	13	13	13	69
Other Malarial Diseases	69	69	69	69

## ORDER 4. ZOGENOUS.

[illegible]

## ORDER 5. VENEREAL.

Syphilis	20
Gonorrhoea, Stricture of Urethra	4

## ORDER 6. SEPTIC.

Erysipelas	36	-	-	-	-	-
Pycæmia, Septicæmia	51	-	-	-	-	-
Puerperal Fever	43	-	-	-	-	-

## Class II.—Parasitic Diseases.

Thrush

TABLE VI.—CONTINUED. TOLLAND COUNTY.

CAUSES OF DEATH.	STATE.	Tolland.	Andover.	Bolton.	Columbia.	Coventry.	Ellington.	Hebron.	Mansfield.	Somers.	Stafford.	Union.	Vernon.	Willington.	TOTAL.
<b>Class III.—Dietetic Diseases.</b>															
Starvation .....	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Intemperance .....	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Chronic Alcoholism .....	41	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Delirium Tremens .....	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Other Dietetic Diseases .....	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>Class IV.—Constitutional Diseases.</b>															
Rheumatism .....	91	—	—	—	—	—	—	—	—	2	—	—	1	—	3
Gout .....	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rickets .....	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cancer not located .....	97	—	—	—	—	—	1	—	—	—	—	—	1	—	2
Cancer of Breast .....	62	—	—	—	1	1	—	—	—	1	—	—	1	—	4
Cancer of Stomach .....	107	—	—	—	—	1	—	—	—	—	—	—	5	1	7
Cancer of Womb .....	73	—	—	—	—	—	—	—	1	—	—	—	—	—	1
Cancer of other Organs .....	132	—	1	1	—	—	—	—	—	—	—	—	2	1	5
Tabes Mesenterica .....	117	—	—	—	—	—	—	—	1	—	—	—	1	—	2
Tubercular Meningitis, Acute Hydroceph.	84	1	—	—	—	—	—	1	—	—	—	—	1	—	3
Phthisis .....	1358	—	—	1	2	1	1	1	1	1	5	—	17	3	33

Other forms of Tuberculosis.....	151	---	---	---	---	3	---	1	1	1	6	---	---	12
Scrofula.....	11	---	---	---	---	---	---	---	---	---	---	---	---	---
Pott's Disease.....	8	---	---	---	---	---	---	---	---	---	---	---	---	---
Hip-Joint Disease.....	4	---	---	---	---	---	---	---	---	---	---	---	---	---
Purpura.....	6	---	---	---	---	---	---	---	---	---	---	---	---	---
Anæmia.....	49	---	---	---	---	1	---	1	---	---	---	---	---	2
Diabetes.....	71	---	---	---	---	1	---	---	1	---	---	---	---	2
Other Constitutional Diseases.....	3	---	---	---	---	---	---	---	---	---	---	---	---	---

## Class V.—Developmental Diseases.

Premature Birth.....	285	---	1	---	---	---	---	---	---	1	3	---	3	8
Atelectasis.....	23	---	---	---	---	---	---	---	---	---	---	---	---	---
Cyanosis.....	25	---	---	---	---	---	---	---	---	---	---	---	---	---
Spina Bifida.....	16	---	---	---	---	---	---	---	---	---	---	---	---	---
Imperforate Anus.....	1	---	---	---	---	---	---	---	---	---	---	---	---	---
Cleft Palate, Hare Lip.....	5	---	---	---	---	---	---	---	---	---	---	---	---	---
Other Congenital Malformations.....	27	---	---	---	---	---	---	---	---	---	---	---	---	---
Umbilical Hemorrhage.....	11	---	---	---	---	---	---	---	---	---	---	---	---	---
Old Age.....	546	1	---	4	2	1	2	1	2	2	1	1	7	25

## Class VI.—Local Diseases.

## ORDER I. OF NERVOUS SYSTEM.

Inflammation of Brain or its Membranes.....	303	---	---	1	---	2	1	---	3	---	6	1	---	8
Apoplexy.....	689	---	---	---	---	---	---	---	---	---	7	10	---	23
Softening of Brain.....	71	---	---	---	1	---	---	---	---	---	1	1	---	3
Hydrocephalus, not acute.....	22	---	---	---	---	---	---	---	---	---	---	---	---	---
Hemiplegia.....	49	---	---	---	---	---	---	1	---	---	---	---	---	1
Paralysis Agitans.....	31	1	1	---	---	---	---	---	1	---	---	---	---	3

TABLE VI—CONTINUED. TOLLAND COUNTY.

CAUSES OF DEATH.	TOLLAND COUNTY.														TOTAL.
	STATE.	Tolland.	Andover.	Bolton.	Columbia.	Coventry.	Ellington.	Hebron.	Mansfield.	Somers.	Stafford.	Union.	Vernon.	Willington.	
Insanity	56	---	---	---	---	1	---	---	---	1	---	---	1	---	3
Chorea	3	---	---	---	---	---	---	---	---	---	---	---	---	---	1
Epilepsy	64	---	---	---	---	1	---	---	---	---	---	---	---	---	8
Convulsions	327	---	---	---	1	---	1	---	---	---	1	---	5	---	---
Trismus Nascentium	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Tetanus	23	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Paraplegia	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Diseases of Spinal Cord	17	---	---	---	---	1	---	---	---	---	1	---	1	1	4
Myelitis	19	---	---	---	---	---	---	1	---	---	1	---	---	---	2
Spinal Meningitis	48	---	---	---	2	---	---	---	---	1	---	---	---	---	3
Locomotor Ataxia	13	---	1	---	---	---	---	---	---	---	---	---	---	---	1
Other Diseases of Nervous System	241	---	---	---	---	---	---	---	1	1	2	---	---	---	4
ORDER 2. OF ORGANS OF SPECIAL SENSE.															
Epistaxis	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Otitis	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Other Diseases of Eye, Ear or Nose	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ORDER 3. OF CIRCULATORY SYSTEM.															
Endocarditis	124	---	---	---	---	---	1	---	---	---	---	---	---	---	1
Valvular Disease of Heart	254	---	---	---	---	4	1	1	---	1	4	---	3	---	14
Disease of Heart.	549	---	1	2	---	5	1	1	2	---	5	1	4	1	23
Pericarditis	22	---	---	---	---	---	---	---	---	1	1	---	---	---	2



[illegible]

## ORDER 5. OF DIGESTIVE SYSTEM.

Stomatitis	10	1	1	1
Dentition	38	1	1	1
Quinsy	10	1	1	1
Dyspepsia	15	1	1	1
Hæmatemesis	8	1	1	1
Disease of Stomach	134	1	1	1
Ulcer of Stomach	22	1	1	1
Enteritis	103	1	1	1
Appendicitis	31	1	1	1
Ulceration of Intestines	14	1	1	1
Obstruction of Intestines	43	1	1	1

TABLE VI--CONTINUED. TOLLAND COUNTY.

CAUSES OF DEATH.															
	STATE.	Tolland.	Andover.	Bolton.	Columbia.	Coventry.	Ellington.	Hebron.	Mansfield.	Somers.	Stafford.	Union.	Vernon.	Willington.	Total.
Strangulation of Intestines	4	4	—	—	—	—	—	—	—	—	—	—	—	—	4
Intussusception of Intestines	6	6	—	—	—	—	—	—	—	—	—	—	—	—	6
Hernia	29	29	—	—	—	—	—	—	—	—	1	—	—	—	30
Fistula	5	5	—	—	—	—	—	—	—	—	—	—	—	—	5
Peritonitis (not puerperal)	129	129	—	—	—	—	—	—	—	—	1	—	3	—	133
Ascites	7	7	—	—	—	—	—	—	—	—	—	—	—	—	7
Gallstones	5	5	—	—	—	—	—	—	—	—	—	—	—	—	5
Cirrhosis of Liver	71	71	1	—	—	—	—	—	—	—	—	—	—	—	72
Hepatitis	29	29	—	—	—	—	—	—	—	—	—	—	—	—	29
Jaundice	2	2	—	—	—	—	—	—	—	—	—	—	—	—	2
Other Diseases of Liver	46	46	—	—	—	—	—	—	—	1	—	—	—	—	47
Other Diseases of Digestive System	24	1	—	—	—	1	—	—	—	2	—	—	—	—	28
ORDER 6. OF LYMPHATIC SYSTEM AND DUCTLESS GLANDS.															
Addison's Disease	4	4	—	—	—	—	—	—	—	—	—	—	—	—	4
Disease of Spleen	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Bronchocele	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Diseases of Lymphatic System	7	7	—	—	—	1	—	—	—	—	—	—	—	—	8
ORDER 7. OF URINARY SYSTEM.															
Nephritis	231	1	1	—	—	—	—	—	—	1	2	—	—	—	5
Bright's Disease	306	1	1	—	1	—	1	—	2	3	1	3	6	—	19













RECAPITULATION OF TABLE VI.

CLASSIFIED DISEASES.												
	STATE.	Hartford Co.	New Haven Co.	New London Co.	Fairfield Co.	Windham Co.	Litchfield Co.	Middlesex Co.	Tolland Co.	Per cent. to Total Mortality.	TOTAL 1894.	
All causes -----	14546	2827	4232	1386	3069	914	944	725	449	100.00	13699	
Classes.												
I. Zymotic Diseases -----	2743	573	900	179	638	193	112	86	62	18.85	2698	
II. Parasitic Diseases -----	3	1	1	---	1	---	---	---	---	---	2	
III. Dietetic Diseases -----	62	20	20	2	13	3	3	1	---	.42	54	
IV. Constitutional Diseases -----	2435	447	685	254	557	138	133	145	76	16.74	2288	
V. Developmental Diseases -----	939	177	260	100	172	44	99	54	33	6.45	840	
VI. Local Diseases -----	6947	1327	1946	695	1414	451	489	384	241	47.76	6381	
VII. Violence -----	712	126	238	68	155	35	40	32	18	4.89	688	
VIII. Ill-defined and cause not stated -----	705	156	182	88	119	50	68	23	19	4.83	748	
Class I.—Orders.												
1. Miasmatic Diseases -----	1204	271	377	69	272	79	60	47	29	8.27	1175	
2. Diarrhoeal Diseases -----	1252	252	418	81	291	108	40	34	28	8.60	1269	
3. Malarial Diseases -----	116	7	59	10	30	2	6	2	---	.79	103	
4. Zoogenous Diseases -----	2	---	---	---	2	---	---	---	---	---	2	
5. Venereal Diseases -----	24	3	11	1	9	---	---	---	---	.16	20	
6. Septic Diseases -----	130	25	35	18	34	4	6	3	5	.90	129	
Class II.—Orders.												
Parasitic Diseases -----	3	1	1	---	1	---	---	---	---	---	2	

<b>Class III.—Orders.</b>											
Dietetic Diseases -----	77	35	20	2	13	3	3	1	-----	.52	54
<b>Class IV.—Orders.</b>											
Constitutional Diseases -----	2435	447	685	254	557	138	133	145	76	16.74	2288
<b>Class V.—Orders.</b>											
Developmental Diseases -----	939	177	260	100	172	44	99	54	33	6.45	840
<b>Class VI.—Orders.</b>											
1. Diseases of Nervous System -----	1991	369	580	183	415	127	135	118	64	13.70	1863
2. Organs of Special Sense -----	8	2	2	-----	4	-----	-----	-----	-----	.05	7
3. Circulatory System -----	1221	213	294	156	268	65	96	76	53	8.38	1109
4. Respiratory System -----	2064	401	601	197	373	163	148	123	58	14.20	1744
5. Digestive System -----	782	166	216	80	174	43	48	27	28	5.36	862
6. Lymph. Sys. and Ductless Glands -----	13	4	4	1	1	1	-----	1	1	.08	13
7. Urinary System -----	696	146	193	65	139	42	51	30	30	4.78	621
8. Generative System -----	146	23	49	10	31	7	11	8	7	.99	129
9. Organs of Locomotion -----	10	-----	3	2	4	1	-----	-----	-----	.06	10
10. Integumentary System -----	16	3	4	1	5	2	-----	1	-----	.11	18
<b>Class VII.—Orders.</b>											
1. Accident or Negligence -----	597	107	199	58	132	27	33	26	15	4.10	566
2. Homicide -----	8	1	5	-----	2	-----	-----	-----	-----	.05	8
3. Suicide -----	107	18	34	10	21	8	7	6	3	.73	113
4. Execution -----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1
<b>Class VIII.—Orders.</b>											
1. Ill-defined -----	683	148	180	86	116	48	64	22	19	4.68	716
2. Cause not stated -----	22	8	2	2	3	2	4	1	-----	.15	32

TABLE VII.

NOSOLOGICAL ARRANGEMENT BY COUNTIES, WITH COMPARATIVE MORTALITY FOR TEN YEARS.

NOTE.--Some of the blank spaces in the following table are due to different methods of tabulating diseases in the previous reports; for example, some reports call all cases of Diarrhoea in children Cholera Infantum, others call them Infantile Diarrhoea. Again, in some reports Cholera Morbus is included with Diarrhoea, in others they are separately counted.

CAUSES OF DEATH.	Hartford Co.												New Haven Co.												New London Co.												Fairfield Co.												Windham Co.												Litchfield Co.												Middlesex Co.												Tolland Co.												1895, Total.												Per cent. to Total Mortality.												1894, Total.												1893, Total.												1892, Total.												1891, Total.												1890, Total.												1889, Total.												1888, Total.												1887, Total.												1886, Total.												Aggregate for Ten Years.												Average for Ten Years.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						



## ORDER 2. DIARRHEAL.

Cholera Infantum	148	215	37	171	45	18	13	13	660	4.53	701	765	783	695	660	506	753	772	----	6295	629.5
Infantile Diarrhoea	27	110	10	53	9	10	7	3	229	1.57	242	207	185	272	219	257	200	173	590	2574	257.4
Cholera Morbus	7	13	1	12	2	3	---	---	40	.27	40	24	55	53	29	36	36	28	28	369	36.9
Dysentery	32	45	13	43	26	8	4	6	177	1.21	185	119	105	101	98	146	168	286	176	1561	156.1
Diarrhoea	38	35	20	12	26	2	7	6	146	1.00	101	129	115	50	84	54	80	86	65	910	91.0
ORDER 3. MALARIAL.																					
Intermittent Fever	1	11	3	6	1	1	1	---	24	.16	16	25	22	13	7	21	32	23	9	192	19.2
Remittent Fever	---	3	2	4	---	1	---	---	10	.06	26	24	29	26	16	30	29	24	23	237	23.7
Pernicious or Congestive Fever	---	7	1	1	---	4	---	---	13	.08	6	12	12	20	9	17	17	18	13	137	13.7
Other Malarial Diseases	6	38	4	19	1	---	1	---	69	.47	55	43	36	30	47	49	56	57	53	495	49.5
ORDER 4. ZOOGENOUS.																					
Hydrophobia	---	---	---	2	---	---	---	---	2	.01	---	2	1	2	1	1	---	1	---	10	1.0
Glanders	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	.1
Cow Pox and effects of Vaccination	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1	.1
Other Zoogenous Diseases	---	---	---	---	---	---	---	---	---	---	1	---	---	1	---	---	---	1	1	4	.4
ORDER 5. VENEREAL.																					
Syphilis	3	8	1	8	---	---	---	---	20	.13	16	14	15	15	10	4	12	10	14	130	13.0
Gonorrhoea, Stricture of Urethra.	---	3	---	1	---	---	---	---	4	.02	4	6	3	2	1	2	---	---	1	23	2.3
Other Venereal Diseases	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	1	.1
ORDER 6. SEPTIC.																					
Phagedena	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	3	4	.4
Erysipelas	7	7	7	9	---	2	2	2	36	.24	29	59	62	47	45	22	45	45	73	463	46.3
Pyæmia, Septicæmia	11	15	6	12	3	3	---	1	51	.35	57	38	54	54	39	51	60	47	43	494	49.4
Puerperal Fever	7	13	5	13	1	1	1	2	43	.29	43	57	78	49	50	49	46	61	40	516	51.6
Class II.—Parasitic Diseases.																					
Thrush	1	1	---	1	---	---	---	---	3	.02	---	1	1	2	---	1	6	1	---	15	1.5
Hydatids	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	1	---	---	1	.1
Worms	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	4	---	1	9	.9
Other Parasitic Diseases	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	1	---	---	3	.3

TABLE VII—CONTINUED.

CAUSES OF DEATH.																					
Class III.—Dietetic Diseases.																					
Hartford Co.	New Haven Co.	New London Co.	Fairfield Co.	Windham Co.	Litchfield Co.	Middlesex Co.	Tolland Co.	1895, Total.	Per cent. to Total Mortality.	1894, Total.	1893, Total.	1892, Total.	1891, Total.	1890, Total.	1889, Total.	1888, Total.	1887, Total.	1886, Total.	Aggregate for Ten Years.	Average for Ten Years.	
Starvation	2	1	1	—	—	—	—	4	.02	4	3	2	1	2	—	3	—	2	21	2.1	
Scurvy	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	.1	
Intemperance	1	4	2	1	1	—	—	10	.06	13	18	12	13	14	25	18	10	42	175	17.5	
Chronic Alcoholism	15	14	1	8	1	1	—	41	.28	32	47	55	60	56	23	16	31	—	361	36.1	
Delirium Tremens	1	—	1	1	—	—	—	3	.02	2	1	5	9	2	9	8	6	17	62	6.2	
Other Dietetic Diseases	1	1	1	—	1	—	—	4	.02	2	4	4	3	—	—	—	1	—	18	1.8	
Class IV.—Constitutional Dis.																					
Rheumatism	12	32	7	25	6	4	2	3	.91	.62	94	121	124	107	109	103	99	76	99	1023	102.3
Gout	—	—	—	1	—	1	—	—	2	.01	4	1	1	1	—	2	1	1	13	1.3	
Rickets	—	3	3	3	—	—	—	9	.06	2	4	2	4	—	5	5	1	3	35	3.5	
Cancer not located	23	15	11	23	5	8	10	2	.97	.66	92	77	84	95	—	—	—	—	445	44.5	
Cancer of Breast	14	22	3	9	3	5	2	4	.62	.42	57	26	52	59	45	38	34	38	421	42.1	
Cancer of Stomach	26	28	15	20	4	2	5	7	1.07	.73	83	82	70	80	65	69	77	54	687	68.7	
Cancer of Womb	20	17	8	16	6	2	3	1	.73	.50	34	82	59	56	38	49	49	43	483	48.3	
Cancer of other Organs	21	45	14	23	3	15	6	5	1.32	.90	150	128	105	126	213	168	188	181	280	1671	167.1
Tabes Mesenterica	8	32	16	39	6	8	6	2	1.17	.80	82	87	75	85	63	75	102	68	117	871	87.1
Tubercular Mening., Acute Hydro.	8	18	11	27	7	3	7	3	.84	.57	106	121	94	100	92	81	75	88	89	930	93.0
Phthisis	264	417	149	291	69	55	80	33	1.358	9.33	1311	1405	1386	1420	1544	1459	1491	1428	1364	14166	1416.6

Other forms of Tuberculosis.....	17	16	6	52	16	14	18	12	151	1.03	126	98	91	87	60	59	53	72	4	801
Scrofula.....	3	3	2	---	2	---	1	---	11	.07	10	16	31	25	31	25	36	25	35	245
Pott's Disease.....	2	3	1	1	1	---	---	---	8	.05	6	6	9	2	2	2	3	3	1	43
Hip-Joint Disease.....	1	2	---	---	---	---	---	---	4	.02	7	8	3	7	5	2	4	2	9	51
Purpura.....	1	1	---	2	---	2	---	---	6	.04	5	5	3	7	10	3	4	6	5	54
Anæmia.....	9	15	3	12	4	4	---	2	49	.33	40	35	32	42	31	23	28	26	28	334
Diabetes.....	18	15	4	11	6	10	5	2	71	.48	77	59	58	79	62	48	49	50	42	595
Other Constitutional Diseases.....	---	1	1	1	---	---	---	---	3	.02	2	5	1	2	5	8	4	---	---	30

## Class V.—Developmental Dis.

Premature Birth.....	53	88	26	60	7	26	17	8	285	1.95	277	238	252	231	200	217	190	274	156	2320
Atelectasis.....	1	16	2	2	---	2	---	---	23	.15	14	12	17	14	11	19	12	48	18	188
Cyanosis.....	7	8	---	4	1	5	---	---	25	.17	23	18	11	17	20	23	26	10	21	194
Spina Bifida.....	5	2	2	5	2	---	---	---	16	.10	9	9	6	11	9	10	8	8	10	96
Imperforate Anus.....	1	---	---	---	---	---	---	---	1	---	1	1	1	3	1	3	1	---	---	12
Cleft Palate, Hare Lip.....	2	1	---	1	1	---	---	---	5	.03	1	---	3	---	---	---	---	---	---	9
Other Congenital Malformations.....	7	6	1	7	1	5	---	---	27	.18	16	22	20	17	14	15	11	19	15	176
Umbilical Hemorrhage.....	---	4	1	5	---	---	---	---	11	.07	10	11	5	10	4	9	6	8	11	85
Old Age.....	101	135	68	88	32	60	37	25	546	3.75	489	561	643	677	638	704	688	623	783	6352

## Class VI.—Local Diseases.

ORDER I. OF NERVOUS SYSTEM.																				
Inflam. of Brain or its Membranes.....	47	119	18	62	23	17	9	8	303	2.01	323	389	307	328	327	252	291	274	292	3086
Apoplexy.....	153	184	65	147	31	53	35	23	689	4.73	533	631	607	588	542	498	468	478	348	5432
Softening of Brain.....	7	11	9	21	10	9	1	3	71	.48	82	73	63	78	91	56	69	54	73	710
Hydrocephalus, not acute.....	9	---	5	3	4	---	1	---	22	.15	19	26	16	26	25	24	37	47	1	243
Hemiplegia.....	5	14	8	10	4	4	3	1	49	.33	29	37	25	28	31	32	25	28	---	284
Paralysis Agitans.....	1	2	3	9	5	5	3	3	31	.21	60	67	68	59	37	40	65	85	---	512
Insanity.....	16	9	6	9	1	3	9	3	56	.38	63	56	60	58	76	47	73	62	37	578

TABLE VII—CONTINUED.

CAUSES OF DEATH.	Hartford Co.										New Haven Co.	New London Co.	Fairfield Co.	Windham Co.	Litchfield Co.	Middlesex Co.	Tolland Co.	1895, Total.	Per cent. to Total Mortality.	1894, Total.	1893, Total.	1892, Total.	1891, Total.	1890, Total.	1889, Total.	1888, Total.	1887, Total.	1886, Total.	Aggregate for Ten Years.	Average for Ten Years.
	Chorea	Epilepsy	Convulsions	Trismus Nascentium	Tetanus	Paraplegia	Diseases of Spinal Cord	Myelitis	Spinal Meningitis	Locomotor Ataxia	Other Diseases of Nervous System	2	7	11	5	1	8	327	.02	2	1	---	6	4	---	3	4	27	27	
	12	11	7	11	5	3	14	1	64	.43	49	47	42	51	47	39	34	43	36	452	45.2							452	45.2	
	66	101	26	72	21	20	13	8	327	2.24	250	300	329	290	281	287	267	251	279	2861	286.1							2861	286.1	
	10	10	1	3	1	1	1	1	10	.06	6	11	13	7	14	9	13	6	5	94	9.4							94	9.4	
	4	13	1	3	1	1	1	1	23	.15	11	24	16	14	17	17	27	22	18	189	18.9							189	18.9	
	---	---	---	---	---	---	---	---	5	.03	5	4	4	8	10	10	7	6	---	59	5.9							59	5.9	
	3	2	1	4	1	1	1	4	17	.11	26	14	21	21	16	23	17	11	12	178	17.8							178	17.8	
	4	7	3	2	---	---	1	2	19	.13	12	12	16	9	10	16	12	4	6	116	11.6							116	11.6	
	9	14	4	6	8	4	---	3	48	.32	37	38	66	44	33	30	36	32	41	405	40.5							405	40.5	
	4	4	4	6	1	1	1	1	13	.08	10	5	11	5	7	7	4	4	4	70	7.0							70	7.0	
	33	79	27	46	12	13	27	4	241	1.65	201	237	220	197	271	218	221	199	285	2290	229.0							2290	229.0	
ORDER 2. OF ORGANS OF SPECIAL SENSE.																														
	---	1	---	1	---	---	---	---	2	.01	---	1	1	---	---	---	---	1	1	6	.6							6	.6	
	1	1	---	2	---	---	---	---	4	.02	4	5	5	6	3	2	3	2	---	34	3.4							34	3.4	
	1	---	---	1	---	---	---	---	2	.01	3	1	---	---	---	---	1	---	---	9	.9							9	.9	
ORDER 3. OF CIRCULATORY SYSTEM.																														
	15	28	12	54	4	7	3	1	124	.85	75	77	70	52	55	63	53	29	---	598	59.8							598	59.8	
	34	85	33	58	7	13	10	14	254	1.74	278	297	172	211	177	176	168	136	---	1869	186.9							1869	186.9	
	125	116	76	91	30	45	44	23	549	3.77	471	483	589	544	536	437	511	511	640	5271	527.1							5271	527.1	
	2	3	2	7	2	3	1	2	22	.15	10	22	20	18	30	20	25	26	13	206	20.6							206	20.6	

Angina Pectoris	15	23	3	14	5	3	2	2	67	.46	62	47	50	34	59	68	70	37	36	530	53.0
Syncope	---	3	---	1	---	2	---	1	7	.04	8	1	13	15	14	9	16	6	---	89	8.9
Aneurism	---	---	2	---	1	2	1	---	8	.05	9	9	11	13	12	5	8	11	13	99	9.9
Senile Gangrene	---	5	8	4	6	1	5	4	34	.23	24	18	22	26	15	28	17	15	27	226	22.6
Thrombosis, Embolism	---	6	5	9	4	4	5	2	36	.24	33	25	50	53	63	41	44	39	14	398	39.8
Phlebitis	---	2	1	---	---	1	---	---	4	.02	3	4	4	4	1	4	1	1	1	27	2.7
Other Diseases of Circulatory Syst.	---	9	21	15	33	10	11	9	116	.79	136	112	124	58	126	77	68	64	---	881	88.1

## ORDER 4. OF RESPIRATORY SYSTEM.

Laryngitis	3	11	3	11	2	3	2	---	35	.24	38	28	27	19	17	23	23	24	17	251	25.1
Catarrhal Croup	5	1	---	1	---	---	---	---	7	.04	3	17	9	---	1	6	3	2	---	48	4.8
Other Dis. of Larynx or Trachea	1	---	---	---	1	---	---	---	3	.02	3	2	2	3	5	3	3	2	---	26	2.6
Emphysema, Asthma	7	13	13	13	4	4	5	2	61	.41	41	44	51	40	27	32	44	37	24	401	40.1
Bronchitis	103	179	43	90	47	32	27	18	539	3.70	446	521	546	481	455	324	365	229	197	4103	410.3
Pneumonia	260	366	125	224	105	104	71	34	1289	8.86	1118	1465	1493	1442	1430	915	1167	963	837	12119	1211.9
Pleurisy	6	18	3	10	2	1	2	2	44	.30	34	38	38	31	31	38	27	28	16	325	32.5
Other Dis. of Respiratory System	16	13	10	24	2	4	16	1	86	.59	61	61	51	44	29	38	48	42	39	499	49.9

## ORDER 5. OF DIGESTIVE SYSTEM.

Stomatitis	2	3	3	1	---	---	---	1	10	.06	8	8	11	9	7	3	10	6	---	72	7.2
Dentition	2	10	2	16	2	1	4	1	38	.26	37	37	25	27	30	45	29	28	35	331	33.1
Quinsy	1	5	1	---	---	1	1	1	10	.06	10	14	11	10	10	5	7	4	2	83	8.3
Dyspepsia	3	2	5	2	1	1	---	1	15	.10	28	20	27	25	25	13	20	17	5	195	19.5
Hæmatemesis	5	1	---	1	---	---	---	1	8	.05	8	7	6	8	5	12	8	8	24	94	9.4
Disease of Stomach	26	34	8	40	7	9	5	5	134	.92	115	140	136	144	136	86	100	84	101	1176	117.6
Ulcer of Stomach	6	7	1	5	1	2	---	---	22	.15	19	17	19	21	22	22	12	17	11	182	18.2
Enteritis	22	23	14	21	9	6	5	3	103	.70	111	138	139	119	131	112	91	98	91	1133	113.3
Appendicitis	16	7	1	6	---	1	---	---	31	.21	19	17	6	---	---	---	---	---	---	73	7.3
Ulceration of Intestines	2	5	---	3	1	---	---	---	14	.09	17	8	11	8	9	9	16	18	9	119	11.9
Obstruction of Intestines	9	13	3	10	2	2	2	2	43	.29	41	37	39	19	31	25	25	22	20	302	30.2
Strangulation of Intestines	---	---	---	1	---	1	---	---	4	.02	11	5	6	5	5	1	1	1	---	39	3.9



TABLE VII—CONTINUED.

CAUSES OF DEATH.																				
Hartford Co.	New Haven Co.	New London Co.	Fairfield Co.	Windham Co.	Litchfield Co.	Middlesex Co.	Tolland Co.	1895, Total.	Per cent to Total Mortality.	1894, Total.	1893, Total.	1892, Total.	1891, Total.	1890, Total.	1889, Total.	1888, Total.	1887, Total.	1886, Total.	Aggregate for Ten Years.	Average for Ten Years.
Intussusception of Intestines	1	2	---	3	---	---	---	6	.04	19	7	7	5	7	7	10	5	10	83	8.3
Hernia	5	7	4	9	2	1	---	29	.19	34	26	32	21	22	23	29	23	18	257	25.7
Fistula	1	4	---	---	---	---	---	5	.03	3	5	3	2	2	1	2	---	5	28	2.8
Peritonitis (not puerperal)	27	32	24	19	11	8	2	129	.88	153	128	163	136	120	122	115	104	127	1297	129.7
Ascites	1	2	2	1	---	1	---	7	.04	9	8	9	8	11	7	5	12	8	84	8.4
Gallstones	---	3	2	---	---	---	---	5	.03	6	7	8	2	4	2	5	5	10	54	5.4
Cirrhosis of Liver	20	20	4	16	4	5	1	71	.48	82	86	69	68	48	63	45	44	40	616	61.6
Hepatitis	7	13	3	3	---	1	2	29	.19	31	40	46	31	52	40	50	63	66	448	44.8
Jaundice	1	1	---	---	---	---	---	2	.01	8	13	16	23	34	29	24	38	30	217	21.7
Other Diseases of Liver	7	11	3	13	3	4	2	46	.31	57	39	36	41	17	15	16	13	17	297	29.7
Other Diseases of Digestive System	2	9	---	4	1	4	2	24	.16	36	36	24	29	21	20	32	24	20	266	26.6
ORDER 6. OF LYMPHATIC SYSTEM AND DUCTLESS GLANDS.																				
Addison's Disease	1	1	1	1	---	---	---	4	.02	5	5	6	5	---	6	---	2	1	34	3.4
Disease of Spleen	---	---	---	1	---	---	---	1	---	3	1	2	3	---	---	1	1	4	16	1.6
Bronchocele	---	1	---	---	---	---	---	1	---	---	1	2	---	1	---	2	---	2	9	.9
Diseases of Lymphatic System	3	2	---	---	---	1	1	7	.04	5	7	3	1	---	2	2	3	1	31	3.1
ORDER 7. OF URINARY SYSTEM.																				
Nephritis	37	79	25	51	12	13	9	5	231	1.58	156	177	142	150	76	79	90	76	50	1227
Bright's Disease	78	68	26	64	18	20	13	19	306	2.03	317	363	340	288	294	281	269	248	233	2939

Uræmia	13	12	7	11	3	7	4	1	58	.39	45	48	29	38	39	34	34	25	25	375	37.5
Suppression of Urine	2		1						3	.02	1	1	2	3	1	3	5	2	---	21	2.1
Calculus		5							5	.03	1	---	1	3	5	4	2	2	7	32	3.2
Hæmaturia			2	1					4	.02	---	2	1	3	12	6	2	2	4	36	3.6
Disease of Bladder	14	17	5	10	6	8	3	3	66	.45	67	74	68	57	55	40	38	42	26	533	53.3
Prostatitis	1	7			1	1	1	2	13	.08	14	11	11	9	8	14	8	11	8	107	10.7
Other Diseases of Urinary System	1	3		2	2	2			10	.06	20	16	14	13	18	10	20	23	37	181	18.1

## ORDER 8. OF GENERATIVE SYS.

## A. Of the Reproductive Organs.

Diseases of the Uterus	1	7	2	2	2	1			15	.10	12	13	11	11	12	9	9	11	24	127	12.7
Metritis			1					1	2	.01	---	3	4	1	2	6	3	2	4	24	2.7
Disease of Ovaries		6	1	2	4	2	1	1	17	.11	10	7	21	11	12	17	15	9	13	132	13.2
Disorders of Menstruation		2	1	1					4	.02	2	1	---	3	---	1	1	---	---	12	1.2
Menorrhagia									2	---	---	---	---	---	---	1	---	1	---	2	.2
Pelvic Abscess		1		1					2	.01	1	3	4	3	1	---	8	1	---	23	2.3
Perineal Abscess									---	---	---	---	1	1	1	2	---	---	---	5	.5
Dis. of Testis, Penis, Scrotum, etc.	1	1					2	1	5	.03	2	2	---	1	---	---	---	2	---	12	1.2

## B. Of Parturition.

Abortion and Miscarriage	3	10		11		2			26	.17	16	20	9	17	6	7	5	15	9	130	13.0
Puerperal Mania								1	1	---	2	---	2	---	5	2	2	5	2	21	2.1
Puerperal Convulsions	1	3	1		1	3	1	2	12	.08	13	14	9	8	10	16	9	15	17	123	12.3
Puerperal Hemorrhage	3	3		1		2			9	.06	9	5	8	2	5	7	6	1	18	70	7.0
Placenta Previa	1	3		2					6	.04	6	4	2	6	3	2	3	1	4	37	3.7
Other Accidents of Childbirth	13	13	4	11		1	4	1	47	.32	56	55	59	42	50	25	39	55	36	463	46.3

## ORDER 9. OF ORGANS OF LOCOMO.

Caries, Necrosis			1						1	---	3	8	4	3	7	9	4	3	3	45	4.5
Arthritis, Periostitis		3	1	4	1				9	.06	7	7	9	19	3	4	4	6	---	68	6.8
Other Dis. of Organs of Locomotion									---	---	---	2	1	1	1	1	3	1	---	10	1.0

TABLE VII.—CONTINUED.

CAUSES OF DEATH.	ORDER 10. OF INTEGUMENTARY SYSTEM.										Average for Ten Years.
	Hartford Co.	New Haven Co.	New London Co.	Fairfield Co.	Windham Co.	Litchfield Co.	Middlesex Co.	Tolland Co.	1893, Total.	Per cent. to Total Mortality.	
ORDER 10. OF INTEGUMENTARY SYSTEM.											
Bedsore				1					1	3	8
Carbuncles										3	18
Other Dis. of Integumentary Syst.	3	4	1	4	2		1		15	.10	114
Average for Ten Years. . . . .											
11.4											
Class VII.—Violence.											
ORDER 1. ACCIDENT AND NEGLIGENCE.											
Fractures and Contusions	14	23	3	9	1	1	1	1	53	.36	472
Fractures and Contusions of Skull	5	4	3	9			1	2	24	.16	258
Railroad Injuries	27	41	23	34	9	9	3	1	147	1.01	1321
Gun-shot Wounds	3	9	3	4		2	1		22	.15	112
Burns and Scalds	11	25	9	9		6	6	2	68	.46	470
Poisoned	2	3	2	4	1				12	.08	177
Drowning	20	24	9	22	7	6	6	3	97	.66	903
Suffocation	4	11	1	6		1		3	26	.17	180
Other Accidents	9	27	3	30	9	5	6	1	90	.61	697
Falling	12	32	2	5		3	2	2	58	.39	516
ORDER 2. HOMICIDE.											
Murder	1			1					2	.01	51
Manslaughter		5		1					6	.04	31

## ORDER 3. SUICIDE.

Gun-shot Wounds	4	10	4	6	5	1	1	31	.21	26	19	28	17	13	10	18	24	212	21.2
Cut, Stab	3	3	--	4	1	--	--	11	.07	10	9	6	12	4	11	6	3	80	8.0
Poisoned	5	11	2	6	1	3	1	29	.19	19	22	13	6	8	17	20	16	168	16.8
By Opium	--	--	1	2	1	1	--	5	.03	6	4	7	7	6	8	--	--	59	5.9
Drowning	1	6	1	3	--	3	--	14	.09	24	17	18	27	20	19	28	11	202	20.2
Hanging	4	2	2	--	--	3	1	13	.08	22	24	42	16	16	23	14	17	208	20.8
Otherwise	1	2	--	--	--	1	--	4	.02	6	5	2	7	4	10	5	9	57	5.7

## ORDER 4. EXECUTION.

Hanging	--	--	--	--	--	--	--	--	--	1	2	1	--	1	1	--	--	6	.6
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## Class VIII.—Unclassified.

Tumor	7	12	3	8	2	1	2	4	39	.26	44	35	24	31	19	37	24	284	28.4
Dropsy	13	12	6	8	12	8	2	4	65	.44	64	65	76	74	83	81	101	703	70.3
Debility, Atrophy, Inanition	75	89	38	28	8	12	5	3	258	1.77	342	319	354	318	302	296	330	2998	299.8
Stroke	1	3	1	1	--	1	--	--	7	.04	12	8	27	3	12	3	8	114	11.4
Exhaustion	10	12	5	11	--	15	3	1	57	.39	48	74	56	77	41	89	71	600	60.0
Hæmorrhage	9	6	9	15	1	3	--	--	43	.29	42	41	41	41	32	43	25	352	35.2
Abscess	6	5	2	7	1	4	--	1	26	.17	10	18	21	17	23	25	21	177	17.7
Sudden Death	--	6	--	1	1	--	2	--	10	.06	5	28	17	10	15	9	18	139	13.9
Other ill-defined causes	27	35	22	37	23	20	8	6	178	1.22	149	177	159	145	263	151	186	2036	203.6
Cause not stated	8	2	2	3	2	4	1	--	22	.15	32	30	38	33	56	90	197	859	85.9





[illegible]

TABLE VIII.—CONTINUED.

TOWNS.	AGES.													Sex not stated.
	Under 1 year.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Unknown.	
Morris	1													
Naugatuck	46	9	5	5	13	11	12	13	8	7	3			
New Britain	122	54	17	26	29	25	27	31	23	10	4	3		
New Canaan	12	1			3	1	5	5	10	12				
New Fairfield	2	1												
New Hartford	15	7	4											
New Haven	437	173	30	75	192	176	164	186	206	145	93	10	3	
Newington	1	2	1	1	3									
New London	46	13	4	9	39	19	28	26	32	29	28	1	2	
New Milford	17	6		5	4	8	5	6	19	8	5			
Newtown	1	2		3	4	5	1	4	6	6	2	2		
Norfolk	5	1												
North Branford	5	1		1										
North Canaan	5	1		1										
North Haven	5	2	1		3	3	1	1	4	6	1	2	4	
North Stonington	76	37	12	13	23	24	22	33	37	51	27	7	4	
Norwalk	73	41	9	18	53	28	38	43	49	50	31	4	2	
Norwich	4													
Old Lyme	4													
Old Saybrook	25	1		2	3	4	6	10	19	12	10			
Orange	5													
Oxford	23	10	1	5	6	6	4	5	6	11	6	1	4	
Plainfield	7	2		3	1	3								
Plainville	5	5	2	1										
Plymouth	3													
Pomfret	21	5	1	6	4	8	4	5	8	9	4	1	4	
Portland	3													
Portret	3													
Preston	3													
Prospect	2													
Putnam	38	12	7	6	14	6	11	7	11	11	9	2	1	
Redding	4													
Ridgfield	10			2	5	3	5	5	4	13	7	2	4	
Rocky Hill	2				1									
Roxbury	2													
Salem	7	7	3	7	9	5	2	8	6	12	5	2	1	
Salisbury	5	2		1	1	1	1	1	1	1	1	1	1	
Saybrook	5	2		1	1	1	1	1	1	1	1	1	1	

[illegible]





Derby	67	10	3	15	1			1					1	2	77	23	1	101	74	28	3	31	1	2	5	9	1	1	14	20	189
Durham	7	2													9			9	9	3											12
Eastford	8	3		1											11	1	1	13	13												12
Easton	19	2		3											21	3		24	13	2											15
East Granby	5	1													6	3		9	5	2	1										8
East Haddam	32	2													34	1		35	24	6									9		38
East Hartford	53	16	4	12											69	19	7	95	69	26	3	14	1	4	3		1	2	5		128
East Haven	22	1	1												23	4		27	11										1	1	17
East Lyme	29	2													31	4		57	28	7	4	1	1	2					1	3	51
East Windsor	41	2	1	8											43	13	1	57	40	16	1	3		9					4		73
Ellington	17	3													20	1		21	17	4		2		1	6				2		34
Enfield	69	16	8	25	6	5									85	45	3	133	68	46	10	21	2	28	3				2		182
Essex	30	5													35			35	35	4									3		43
Fairfield	46	11	1	6											57	9	5	71	47	6		2	1					6		1	81
Farmington	38	5	2	7											43	11		54	39	12	1	7		2				3	1		65
Franklin	7														37	8		45	33			1									8
Glasgowbury	35	2		3											2			13	7	2				15	2	1			1		64
Goshen	11														1	2		28	12	2									1		10
Granby	18	6		3											24	4		28	12	1											14
Greenwich	112	57	1	26	2										169	43	1	213	129	16	7	28	1					4	18		228
Griswold	39	8	1	1											47	21		84	59	3		3	1	31	5			1	2		99
Groton	65	10	1	1	2										75	5	4	66	33	10								2			75
Gulford	51	5	1	2	1										56	8	2	60	33	4								3			60
Haddam	33			1											3	6	1	40	24	4								5	1		55
Hamden	47	6	1	6											53	14	2	69	42	15	2	1	2	10	5	3		2			13
Hampton	8	3													11			111	613	255	17	213	18	29	98	88		54	135	100	1620
Hartford	632	133	23	205	10	11	42	9							785	322	4	111	613	255	17	213	18	29	98	88		54	135	100	8
Hartland	9	2													11			13	9	2	1		1								24
Harwinton	9	1	1												1			13	16	2											23
Hebron	22	1		2											23	2		25	16	2											23
Huntington	46	11	3	5											57	10	3	70	63	24	6	7		1	2	1		1	10		117
Kent	10	3													13	1		14	18	3	1	1									23
Killingly	69	23	4	8											82	21	4	117	67	42	1	3		59				3			175
Killingworth	8	1													9			17	6	2											10
Lebanon	16	5	1												21	1	1	23	24	4		1						1	1		32
Ledyard	12	5													17		2	19	7												9
Lisbon	12														12			14	4	2	1										12
Litchfield	47	11	4	9											53	14		72	30	9		6									55
Lyme	12														12	1		13	13												18
Madison	28	4													32			32	11	2	1										13
Manchester	63	9	5	30	2										72	32		125	42	28	2	69	1								18
Mansfield	22	4	2	3	3	2									26	10		36	17	7											190
Marbleborough	4	1													5			5	4	1											25
Marlborough	222	33	18	42	4	5	28	3							261	108	6	375	218	118	25	57									9
Meriden	4														4			10	17												750
Middlebury	5														7	3		10	17												9
Middlefield	4	2	1	2											233	115	1	349	160	61	10	24	3								20
Middletown	193	40	12	67	3	5	12	3							1			1	25	5											354
Milford	42	7													40	2		61	50	10		22	1	2	1						71
Monroe	18	2	1	6											29	9		222	16	4											21





[illegible]

TABLE X.  
RECAPITULATION OF TABLES EIGHT AND NINE.

[illegible]

# NATIONALITY.

D'ths of those born in Conn. other States		8,248	9,152	9,254	8,903	8,586	7,782	8,269	7,984	7,544	61.4	60.2	61.4	61.0	61.8	62.8	62.1	63.7	64.4	65.0
		1,947	1,908	1,971	1,913	1,721	1,725	1,626	1,460	1,342	13.3	13.4	12.8	12.9	13.2	12.5	13.7	12.5	11.7	11.6
Total for the United States		10,879	11,060	11,225	10,816	10,307	9,507	9,895	9,444	8,886	74.7	73.6	74.2	73.9	75.1	75.4	77.6	76.2	76.3	76.7
D'ths of those born in Ireland		1,815	1,990	2,020	1,879	1,822	1,675	1,696	1,613	1,461	12.4	12.8	13.3	13.3	13.0	13.3	13.3	13.0	12.2	12.5
Germany		449	446	433	448	383	394	335	357	315	3.0	3.2	3.0	2.8	3.1	2.7	3.1	2.5	2.8	2.7
England		329	375	408	344	337	284	319	320	285	2.2	2.5	2.5	2.6	2.3	2.3	2.2	2.4	2.5	2.5
Italy		95	93	67	68	49	25	55	28	28	.6	.7	.6	.4	.4	.3	.1	.4	.2	.1
Sweden		128	115	125	110	93	69	81	29	---	.8	.8	.7	.8	.7	.6	.5	.6	.2	---
Canada		269	251	275	245	204	180	192	165	173	1.8	1.8	1.6	1.8	1.7	1.4	1.4	1.4	1.3	1.5
other For. Countries		324	313	326	283	255	231	228	128	186	2.2	2.3	2.1	2.1	1.9	1.8	1.8	1.7	1.2	1.7
Total of Foreign Births----		3,409	3,582	3,654	3,377	3,143	2,858	2,906	2,640	2,448	23.4	24.3	24.0	24.0	23.4	23.0	22.8	22.3	21.1	21.0
Nativity not stated -----		258	279	291	192	215	164	179	301	282	1.7	2.0	1.7	1.9	1.3	1.5	1.3	1.3	2.4	2.4
Grand Total -----		14,546	14,901	15,170	14,385	13,665	12,529	12,980	12,385	11,616	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
SEASONS.*																				
Deaths in Spring -----		3,785	3,142	3,997	3,648	3,248	3,128	3,390	2,957	2,999	26.0	22.9	26.8	24.0	25.2	23.7	24.9	26.1	23.9	25.8
Summer -----		3,694	3,812	3,870	3,876	3,699	3,525	3,491	2,877	3,117	25.3	27.8	26.0	25.5	25.2	26.3	28.1	26.9	31.2	26.8
Autumn -----		3,496	3,182	3,233	3,281	3,392	3,039	2,951	2,703	2,820	24.0	23.2	21.7	21.6	23.5	22.1	24.2	19.9	21.8	24.3
Winter -----		3,571	3,563	3,801	3,734	3,793	2,837	3,148	2,848	2,680	24.7	26.0	25.5	28.7	25.9	27.7	22.6	24.2	22.9	23.1
Total -----		14,546	13,699	14,901	14,385	13,665	12,529	12,980	12,385	11,616	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Births.																				
Births in Spring -----		4,980	5,331	5,013	4,565	4,354	4,213	4,010	4,163	3,896	24.8	26.1	24.6	25.3	24.5	25.0	24.4	23.7	25.0	24.4
Summer -----		5,031	5,186	5,307	4,838	4,412	4,577	4,511	4,193	4,120	25.2	25.4	26.1	25.5	26.0	25.3	26.6	26.6	25.3	25.8
Autumn -----		4,974	4,868	4,931	4,592	4,282	4,276	4,344	4,231	4,045	24.8	23.9	24.2	24.4	24.7	24.6	24.8	25.7	25.5	25.4
Winter -----		4,946	4,960	5,045	4,563	4,346	4,110	4,013	3,996	3,873	24.8	24.3	24.8	24.6	24.5	24.9	23.9	23.7	23.3	24.4
Total -----		19,931	20,345	20,296	18,558	17,394	17,176	16,878	16,583	15,934	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

\* A few not stated by seasons are distributed equally.



TABLE XI.

CAUSES OF DEATHS BY MONTHS, AGE AND SEX, ALPHABETICALLY ARRANGED.

January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mo. not stated.	DISEASES.	Under 1.	1 to 5.	5 to 10.	10 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Age not stated.	Male.	Female.	Sex not stated.	Total.
3	3	2	2	4	3	1	1	2	3	1	5	5	Abscess	6	1	1	3	3	3	4	4	3	2	3	3	3	13	13	1	26	
1	1	1	1	1	1	1	1	1	1	1	1	3	Brain	3	3	1	1	1	1	1	1	1	1	1	1	1	3	1	1	4	
1	1	1	1	1	1	1	1	1	1	1	1	1	Liver	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	1	1	Lumbar	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	1	1	Lung	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	1	1	Pelvic	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	2	6	2	2	1	3	4	1	2	4	1	7	Abortion and Miscarriage	7	6	10	3	6	3	3	3	7	2	2	2	2	4	4	22	2	26
4	5	2	5	3	4	3	2	7	3	5	3	3	Accidents	3	3	7	8	6	6	6	7	2	2	2	2	2	38	8	46	2	
1	1	1	1	1	1	1	1	1	1	1	1	1	Asphyxia by Illum. Gas	1	1	1	1	1	1	1	1	2	2	2	2	7	5	2	7	1	
1	1	1	1	1	1	1	1	1	1	1	1	1	Caught in Shafting	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	1	1	Crushed by Derrick	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	1	1	Elevator	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	1	1	Falling Rocks	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	
1	1	1	1	1	1	2	2	2	1	1	1	2	Electric Cars	2	2	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1	1	1	Explosion	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	5	3	
1	1	1	1	1	1	1	1	1	1	1	1	1	Kicked by Horse	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	5	3	
1	1	1	1	1	1	1	1	2	1	1	1	1	Run Over by Wagon	2	2	1	1	1	1	1	1	1	1	1	1	1	4	4	4	4	
1	1	1	1	1	1	1	1	1	1	1	1	1	Strangulation	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1	1	1	Thrown from Carriage	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1	1	1	Electric Wire	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	Shock	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	Lightning	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	Addison's Disease	1	1	2	2	2	1	1	1	1	1	1	1	2	2	2	2	2	2
1	1	1	1	1	1	1	1	1	1	1	1	1	Albuminuria	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2
3	4	1	1	2	2	6	4	2	8	4	4	4	Alcoholism	1	1	6	9	9	9	8	6	3	3	3	3	31	10	41	10	41	



3	4	8	5	2	4	3	4	6	3	3	Anæmia	3	2	2	3	12	5	5	2	8	14	28	42
2	1	---	---	---	---	---	---	---	1	---	Aneurism	---	---	---	---	1	---	2	---	1	1	3	4
1	---	1	---	---	---	---	---	---	1	---	of Aorta	---	---	---	---	---	1	---	2	---	4	4	
3	3	8	6	5	9	3	5	7	5	4	Angina Pectoris	---	---	---	---	1	6	7	14	16	40	67	
1	---	---	---	---	---	---	---	---	---	---	Aortic Stenosis	---	---	---	---	---	---	---	1	---	1	1	
70	59	63	65	59	41	54	53	52	59	52	Apoplexy	6	6	---	6	12	21	48	122	163	192	684	
2	2	2	1	1	4	2	6	3	1	3	Appendicitis	---	1	---	8	11	4	5	---	1	20	31	
---	1	---	---	1	2	2	1	---	---	1	Arthritis	1	1	---	---	---	1	2	2	1	4	8	
---	---	1	---	3	---	1	1	---	---	1	Ascites	---	---	---	---	---	---	2	2	2	4	7	
2	1	---	---	---	1	5	1	---	1	2	Asphyxia	12	---	---	---	---	1	---	---	5	8	13	
1	5	3	5	6	2	4	5	8	3	2	Asthma	7	---	---	2	---	1	5	4	26	22	48	
3	1	2	---	---	1	1	1	4	---	4	Atelectasis	22	1	---	---	---	---	1	4	13	11	23	
---	---	---	---	---	---	1	---	---	---	---	Bedsores	---	---	---	---	---	---	---	---	1	1	1	
1	1	2	---	4	3	---	3	---	1	---	Bladder, Disease of	---	---	---	---	---	1	2	---	1	14	15	
1	---	---	---	---	---	---	---	---	---	---	Brain, Disease of	---	---	---	---	---	---	---	1	---	---	1	
16	25	26	21	21	16	33	33	17	22	7	Inflammation of	103	62	19	13	11	6	9	8	9	125	251	
---	---	---	---	---	2	---	---	---	---	---	Paralysis of	---	---	---	---	---	---	1	1	---	1	2	
8	6	9	4	3	7	5	7	8	4	2	Softening of	3	---	---	---	1	3	2	7	16	40	71	
---	---	---	---	---	---	---	---	---	1	---	Tumor of	---	---	---	---	---	---	1	---	---	---	1	
21	19	31	27	29	20	27	22	36	27	23	Bright's Disease	1	4	1	7	19	30	47	51	64	151	303	
---	---	---	---	---	---	---	---	---	---	---	Bronchocele	---	---	---	---	---	---	---	---	1	---	1	
43	74	76	53	41	25	13	19	27	31	29	Bronchitis	141	37	6	4	19	17	29	47	77	218	464	
10	10	9	11	4	2	1	4	3	6	4	Capillary	36	21	2	1	2	1	2	4	2	42	75	
4	5	3	7	5	8	10	4	2	10	5	Burns and Scalds	8	22	12	4	4	5	3	3	6	39	68	
---	---	---	2	1	---	2	---	---	---	---	Calculus	---	---	---	---	1	2	1	---	1	4	5	
---	2	---	---	1	---	1	---	1	---	---	Cancer of Abdomen	---	---	---	---	---	1	1	---	3	2	5	
---	---	2	---	---	---	1	---	---	---	---	of Arm	---	---	---	---	---	---	1	---	2	2	3	
1	---	---	---	---	2	---	1	---	1	1	of Bladder	---	---	---	---	---	---	2	2	---	3	6	
1	---	---	---	---	---	---	---	---	1	---	of Bowels	---	---	---	---	---	---	2	---	---	---	2	
6	5	2	8	4	7	4	10	2	2	6	of Breast	---	---	---	1	3	15	14	17	9	60	61	
---	---	---	---	---	1	---	---	---	---	---	of Cervix	---	---	---	---	---	---	1	---	---	1	1	
2	---	1	2	1	1	1	1	---	3	1	of Face	---	---	---	---	---	2	2	1	4	8	14	
---	---	---	---	---	---	---	---	---	---	---	of Foot	---	---	---	---	---	1	---	---	---	1	1	
2	---	2	---	1	---	---	---	2	---	1	of Intestines	---	---	---	---	---	---	3	2	---	---	5	



21	3	6	4	3	1	5	3	3	3	6	2	Cerebro Spinal Meningitis	12	15	4	4	3	1	1	1	1	21	20	41
2	2	6	2	6	8	4	1	2	3	3	1	Chicken Pox	3	22	5	2	11	6	3	3	3	3	3	
1	2	6	5	7	54	238	218	98	32	3	4	Childbirth, Accidents of	554	99	5	2	11	6	3	3	10	32	42	
2	2	1	1	1	4	13	11	7	1	1	3	Cholera Infantum	4	3	2	2	6	2	6	3	5	14	26	
2	1	1	1	1	1	1	1	1	1	1	1	Cholera Morbus	4	3	2	2	6	2	6	3	5	1	40	
5	8	9	8	13	7	5	7	4	7	9	8	Chorea	4	3	2	2	2	2	2	2	1	3	3	
6	9	5	6	1	3	7	10	4	10	3	6	Circulatory Sys., Dis. of	4	4	2	2	4	6	12	16	32	11	1	
1	2	1	1	1	2	1	1	1	1	1	1	Cirrhosis of Liver	5	5	2	4	12	13	16	13	9	3	70	
1	1	1	1	1	1	1	1	1	1	1	1	Cleft Palate	5	5	2	1	4	12	13	16	13	9	5	
1	1	1	1	1	1	1	1	1	1	1	1	Colic	5	5	1	1	6	1	1	1	3	3	6	
1	1	1	1	1	1	1	1	1	1	1	1	Compression of Brain	1	1	1	1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	1	1	1	1	Concussion of Brain	3	3	1	1	2	5	1	1	2	3	5	
2	2	2	2	2	2	2	2	2	2	2	2	Congestion of Brain	3	3	1	1	1	1	1	1	1	1	5	
103	111	155	109	117	107	111	102	91	123	101	128	Constitutional Diseases	26	22	12	145	415	292	173	120	80	53	15	2
2	2	2	2	2	2	2	2	2	2	2	2	Consumption	26	22	12	145	415	292	173	120	80	53	15	1358
29	35	29	27	21	27	32	34	25	21	26	21	Continued Fever	239	62	5	1	3	2	2	2	2	2	2	8
1	1	3	3	3	3	3	3	3	3	3	3	Convulsions	2	5	5	1	7	6	3	2	2	2	2	327
10	9	7	7	7	2	3	6	9	24	25	17	Croup, Catarrhal	14	85	25	1	1	1	1	1	1	1	1	7
1	2	3	3	4	4	4	3	1	1	1	2	Membranous	25	25	1	1	1	1	1	1	1	1	1	126
7	4	7	1	4	4	7	2	5	3	7	3	Cyanosis	1	1	1	1	1	1	1	1	1	1	1	25
23	25	21	17	12	13	29	29	26	25	11	16	Cystitis	177	5	1	1	1	2	4	2	11	20	11	51
1	1	1	1	1	1	1	1	1	1	1	1	Debility, Atrophy, Inanit.	1	1	1	1	1	1	2	7	18	18	15	247
4	1	2	4	2	6	6	4	5	1	2	1	Delirium Tremens	29	9	1	1	1	1	2	1	1	1	1	3
5	8	9	5	7	2	4	4	7	4	8	8	Dentition	2	2	6	5	7	6	12	19	10	4	38	
2	2	7	5	6	7	4	21	36	31	18	6	Diabetes	64	13	3	3	5	3	9	17	18	13	71	
2	4	1	7	4	17	60	47	48	24	7	6	Diarrhoea	171	53	1	1	1	1	1	1	1	1	1	147
1	1	1	1	1	1	1	1	1	1	1	1	Diarrhoea Infantile	1	1	1	1	1	1	1	1	1	1	1	227
1	1	1	1	1	1	1	1	1	1	1	1	Dietetic Diseases	1	1	1	1	1	1	1	1	1	1	1	4
34	17	10	10	16	18	8	11	24	40	34	40	Digestive System, Dis. of	4	4	3	3	3	3	3	3	3	3	3	17
6	7	6	7	3	5	5	6	5	2	7	5	Diphtheria	24	141	63	25	2	1	6	1	6	1	1	262
3	2	2	4	7	8	17	16	14	10	9	4	Dropsy	5	3	1	1	3	9	6	11	15	10	1	64
3	2	2	4	7	8	17	16	14	10	9	4	Drowning	3	10	20	12	11	13	15	8	5	2	1	100

TABLE XI—CONTINUED.

DISEASES.		Under 1.													Over 100.													Age not stated		Male.		Female.		Sex not 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January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mo. not stated.													Dysentery													Dyspepsia													Eczema													Embolism													Cerebral													Empyæma													Empysemæ													Endocarditis													Enteritis													Enterocolitis													Epilepsy													Epistaxis													Erysipelas													Exhaustion													Exophthalmic Goitre													Exposure													Eye, Ear and Nose, Dis. of													Falling													Fistula													Found Dead													Fractures and Contusions.													Fracture of Arm													Fracture of Hip													Fracture of Leg													Fracture of 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TABLE XII.

## OCCUPATIONS AND AGES OF DECEDENTS.

OCCUPATIONS.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Age not stated.	Total, 1895.	Total, 1894.	Total, 1893.	Total, 1892.	Total, 1891.	Total, 1890.	Total, 1889.	Total, 1888.	Total, 1887.	Total, 1886.
Actors													3		1						
Agents			2	3	1	4	1					11	13	18	6	14	4		3	5	2
Architects		1		1	1			1				4	2	2							
Army Officers						1						1	1	1							
Artists				2								2	3	3							
Auctioneers														1	1						
Authoresses															1						
Baggage Masters			2	1								3									
Bakers		1	2	2		2						7	8	15	16	9	8	4	8	4	7
Bankers				3		1	6	1				11	12	5	2	8	6	7	1	9	6
Barbers	1	3	9	2	1	2	2					20	12	13	13	13	14	10	19	17	5
Bar Tenders		4	4	3		1						12	8	12	7	6	10	1	15	10	8
Blacksmiths	1	7	8	9	6	7	11	5	1			55	75	57	54	41	54	46	37	54	46
Boiler Makers					1							1	2	3							
Book Binders						2						2	5	2	2						
Book-keepers	2	4	6	4	4	5	2					27	25	33	16	24	16	24	32	14	17
Bottlers		1	1		1	2						5	1		3	2	1			1	
Box-makers		3	2	1		1	1					8	1	4	3	3	2		10	1	
Brakemen		8	7		1							16	23	33	32	25	27	22	14	18	9
Brass Finishers			1	1								2	3	5	2	2	2		19	1	1
Moulders		1	2	1	1							5	2	3	1	1	4	1	1	3	
Turners		1										1			3	1	1	1	1	1	1
Workers		1	1				1	1				4	13	2	3	3	2	3	3	3	1
Brewers				1	1							2	1		4	2	2		3	2	1
Brick-layers				1	1		1		1			4		4	4	8	5		3	2	3
Makers		1	1		1		1	1				5	2		1	6	3		3	1	1
Bridge Builders	1											1	2	4	2						
Brokers		1		2		1						4	2	3	5	2	7	4	1	5	1
Buffers		1	1	1	1							4	7	3	6	3	7	5	8	6	5
Builders					1	1		2				4	6	4	5	4	6	3	16	4	9
Burnishers		1		2		1						4	5	5	7	4	7	1	12	5	6
Butchers			3	7	3	1	2	1	1			18	19	33	20	16	25	26	25	17	16
Cabinet Makers			1	1	1	2		1				6	6	7	12	8	5	10	11	4	4
Cartridge Makers														2							
Caterers														1							
Carpenters	2	9	7	15	16	28	26	17	1			121	106	151	131	120	126	126	94	79	80
Carriage Makers			1		1	6	5					13	15	15	25	8	5	11	14	6	8
Charcoal Burners													1	1							
Chemists														1							
Cigar Makers		2	3	2	1	2						10	12	13	13	9	10	14	16	10	6
Civil Engineers			3	1			2	3	1			10	2	1	1						
Clergymen		1	1	2	5	5	8	5	2			29	16	20	23	29	17	27	26	27	15
Clerks	4	24	27	12	10	8	6	1				92	53	101	94	78	79	50	76	44	55
Clock Makers			1	1	1		1					4	4	8	6	10	3	5	10	4	
Coachmen		2	1	2	3	2	1					11	8	5	7	5	11	9	6	10	6
College Presidents													1								
Conductors		3	2	3			1					9	3	6	7	2	1	2	5	1	6
Confectioners														5	7	2	1		1	2	
Contractors			3		2	2	2	2				11	10	8	10	2	11	5	13	5	3
Cooks		5	2	7	1	2	2	1				20	11	18	19	7	18	7	19	6	9
Coopers			1	2		1	3	1	1			9	5	5	3	5	2	6	7	4	2
Corset Makers	1	5	1		1							8	2	2	11	2	4	8	9	3	1
Custom Ho. Officers			1									1		1							
Cutlers				1	2							3	5	1	5	4	3	3	6	8	3

TABLE XII—CONTINUED.

OCCUPATIONS.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Age not stated.	Total, 1895.	Total, 1894.	Total, 1893.	Total, 1892.	Total, 1891.	Total, 1890.	Total, 1889.	Total, 1888.	Total, 1887.	Total, 1886.
Dairymen			1									1	3	1							
Dentists			1			1	1	3				6	5	2	7	5	5	3	2	2	3
Designers				1			1					2	4	1							
Detectives														1							
Deputy Sheriffs						1						1		1	1						
Diesinkers							1					1	3	1							
Domestics	4	9	6	5	7	5	12	4	3			55	56	91	131	118	108	102	73	48	112
Draughtsmen		1										1									
Dress Makers	1	11	4	1	4	5	1	1				28	18	25	17	12	17	15	29	20	19
Drivers	1	2	4	4	5	1	1					18	25	10	21	7	11		4	1	2
Druggists		1	1	1	3	1						7	11	14	13	6	9	10	14	6	6
Dyers			1	3	1		1					6	3	5	9	6	8	4	3	2	3
Editors					1							1	2	3	3	4					
Electricians			1					1				2	3	2							
Electrotypers															1	2					
Engineers		5	2	4	8	2	7	3				31	37	33	30	29	15	23	21	19	13
Engravers		1										1	5	8	2	3	2		1	1	3
Expressmen			1	1	2	1						5	1	5	2	6	4	7	5	2	2
Factory Hands	14	21	12	4	1							52	43	17	40	61	74	86	6	20	18
Farmers	12	38	43	48	75	162	288	148	25			839	895	839	929	841	846	831	770	772	712
Firemen		4	1	2								7	8	5	6	7	3	1	3	2	1
Fishermen					1	1	1	2				5	3	14	13						
Florists					2		1					3		2							
Foremen		1	2	4	3							10	12	6	1	3	7		7		4
Forgers			1			1						2		1	1	3					
Furriers													2		3						
Gardeners		1	3	5	4	7	2	3				25	23	24	23	22	17	14	13	20	16
Gate Tenders					1	1						2		2							
Glass Blowers							1					1									
Glass Cutters			1									1		1							
Gov'm't Employee													1								
Grinders		1	2	3	3		1					10	9	9	7	7	14	17	7	11	7
Grocers		2	2	1	2	1		1				9	10	2	11	11	2	7	12	4	6
Gilders			1									1									
Gunsmiths						1	1	1				3	2	7	4	6	4	3	4	3	4
Hackmen		1										1		3	1	3	1			3	2
Harness Makers		3	2	2	1	1	2					11	8	12	15	14	8	6	15	8	6
Hatters		6	15	9	5	4	4	4				47	40	75	66	69	29	48	53	43	27
Hat Trimmers	1				1	1						3	7	6	5	7	6	2	3	2	2
Hostlers		3	1	2	1	2		1				10	15	18	16	20	15	18	16	5	12
Hotel Clerks		1	1		1							3		1	2	2	2	1	1	1	1
Hotel Keepers		2	1	1	1	2						7	12	16	11	2	12	6	12	7	13
Housewives	21	206	257	206	305	392	400	244	42	1		2074	1978	1968	2170	2007	1971	1699	1676	1523	1608
Inspectors		1										1	3	1	5						
Insurance Agents			4	2	1	2	1					10	9	8	4	10	4	3	13	1	4
Iron Moulders			2	2		1	2	1				8	5	7	2	3	5				
Jailors														1							
Janitors		1		3	3	3						10	6	2	13	10	10	4	6	5	6
Jewelers					2		1					3	5	6	6	5					
Journalists		2										2	1	1	2						
Jockeys	1											1			1						
Laborers	19	126	114	110	114	121	96	32	4	1		727	682	761	747	651	636	594	692	561	481
Lathers														1							
Laundrymen			1		1	1						3	1	1							
Laundresses			2	2								4	5		6	6	5	6	3	2	
Lawyers		1	2	2	3	2	9	2				21	17	9	22	17	10	14	21	21	10
Linemen		2	4									6	6	3	2	1					

TABLE XII—CONTINUED.

OCCUPATIONS.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Age not stated.	Total, 1895.	Total, 1894.	Total, 1893.	Total, 1892.	Total, 1891.	Total, 1890.	Total, 1889.	Total, 1888.	Total, 1887.	Total, 1886.
Liquor Dealers	---	---	---	---	---	---	---	---	---	---	---	---	---	3	3	1	5	1	4	---	2
Liverymen	---	1	---	---	2	1	3	---	---	---	---	7	8	4	13	2	6	8	9	12	5
Locksmiths	---	---	---	1	1	1	---	---	---	---	---	3	13	6	10	2	8	4	8	4	2
Lumbermen	---	1	---	---	---	---	---	---	---	---	---	1	---	1	2	---	---	---	---	---	---
Machinists	3	15	12	6	14	9	16	2	1	---	---	78	64	81	76	71	73	54	61	48	42
Mail Carriers	---	---	---	---	---	---	1	---	---	---	---	1	2	2	1	---	---	---	---	---	---
Mail Clerks	---	---	---	---	---	---	---	---	---	---	---	---	1	---	2	---	---	---	---	---	---
Manufacturers	---	2	3	2	7	7	8	6	1	---	---	36	35	49	50	44	37	33	31	44	26
Marble Cutters	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---
Masons	1	2	5	8	5	6	9	6	---	---	1	43	50	44	42	25	38	36	43	41	37
Mechanics	8	23	18	18	19	38	22	4	1	---	---	151	137	160	154	177	117	133	158	138	132
Merchants	---	9	19	22	21	31	26	7	2	---	---	137	140	130	134	141	130	91	117	111	114
Messengers	---	---	---	---	---	---	---	---	---	---	---	---	---	4	2	---	---	---	---	---	---
Millers	---	1	---	---	1	1	4	---	---	---	---	7	10	5	6	11	7	5	5	6	6
Mill Hands	19	44	13	12	13	7	6	1	---	---	---	115	134	134	139	104	104	67	110	88	79
Milliners	---	2	---	1	2	---	---	---	---	---	---	5	4	8	4	5	1	4	4	2	2
Millwrights	---	---	---	---	---	1	1	1	---	---	---	3	---	1	---	---	---	---	---	---	---
Miners	---	---	1	---	1	---	---	---	---	---	---	2	2	---	3	---	---	---	---	---	---
Missionaries	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---
Motorneer	---	1	---	---	---	---	---	---	---	---	---	1	1	---	---	---	---	---	---	---	---
Moulders	1	4	9	9	8	5	2	---	---	---	---	38	25	43	39	41	56	40	45	40	38
Musicians	---	2	3	1	1	1	2	---	---	---	---	10	6	6	5	11	5	8	5	4	4
Nurses	1	5	---	3	4	6	4	3	---	---	---	26	25	15	18	21	13	17	13	8	15
Opticians	---	---	---	---	---	---	---	---	---	---	---	---	1	1	---	---	---	---	---	---	---
Organ Makers	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	2	2	1	---	---	---
Overseers	1	1	1	1	1	1	---	---	---	---	---	6	4	7	---	---	---	---	---	---	---
Oystermen	---	1	---	1	1	3	1	---	---	---	---	7	9	5	13	6	2	2	5	6	5
Painters	12	7	16	10	11	6	---	---	---	---	---	62	79	70	72	70	49	49	30	52	46
Paper Makers	---	2	1	1	---	---	---	---	---	---	---	6	9	5	12	5	---	---	---	---	---
Pattern Makers	---	---	---	1	---	2	---	1	---	---	---	4	9	5	---	---	---	---	---	---	---
Peddlers	1	1	---	---	1	---	1	---	---	---	---	4	15	12	12	16	10	10	10	10	9
Photographers	---	1	---	---	2	---	---	---	---	---	---	3	3	1	2	1	4	3	5	3	1
Physicians	3	3	1	4	7	4	4	---	---	---	---	26	22	31	31	34	25	20	23	22	27
Piano Makers	---	---	---	1	2	---	---	---	---	---	---	3	---	2	1	1	3	---	4	---	---
Piano Tuner	---	1	---	1	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	---
Pilots	---	---	---	---	1	---	---	---	---	---	---	1	4	---	---	---	---	---	---	---	---
Plasterers	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---
Platers	3	1	1	---	---	---	---	---	---	---	---	5	2	5	6	---	---	---	---	---	---
Plumbers	1	5	4	3	2	1	---	---	---	---	---	16	13	9	15	9	9	9	12	3	7
Policemen	---	---	1	---	---	---	---	---	---	---	---	1	11	4	7	5	5	2	2	---	---
Polishers	2	2	1	1	1	1	---	---	---	---	---	8	9	9	12	10	12	15	7	8	13
Pork Packers	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---
Porters	---	1	1	1	---	---	2	---	---	---	---	5	3	1	3	1	---	---	---	---	---
Post Masters	---	---	---	---	2	2	---	---	---	---	---	4	5	2	2	6	---	---	---	---	---
Printers	2	2	---	1	---	---	1	---	---	---	---	6	17	9	18	17	18	13	22	14	10
Publishers	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---
Quarrymen	---	---	1	1	2	---	---	---	---	---	---	4	8	20	8	10	4	8	13	14	9
Railroad Builders	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---
Railroad Employes	6	4	1	2	2	1	---	---	---	---	---	16	17	7	28	22	14	8	9	16	5
Real Estate Agents	---	1	---	3	1	2	---	---	---	---	---	7	2	5	9	3	7	1	4	4	1
Reporters	1	---	---	---	---	---	---	---	---	---	---	1	---	2	1	3	---	---	---	---	---
Roofers	---	1	---	---	---	---	---	---	---	---	---	1	1	1	---	---	---	---	---	---	---
Rubber Workers	2	7	4	2	1	---	---	---	---	---	---	16	26	23	12	34	28	10	15	9	8
Sail Makers	---	---	---	---	---	---	---	---	---	---	---	---	2	---	2	1	1	1	2	---	---
Salesmen	---	1	---	1	1	---	---	---	---	---	---	3	21	8	10	7	18	6	4	6	8
Saloon Keepers	2	11	4	---	2	---	---	---	---	---	---	19	17	13	17	27	15	20	23	15	23



TABLE XII—CONTINUED.

OCCUPATIONS.	15 to 20.	20 to 30.	30 to 40.	40 to 50.	50 to 60.	60 to 70.	70 to 80.	80 to 90.	90 to 100.	Over 100.	Age not stated.	Total, 1895.	Total, 1894.	Total, 1893.	Total, 1892.	Total, 1891.	Total, 1890.	Total, 1889.	Total, 1888.	Total, 1887.	Total, 1886.
Sawyers					1	1	1					3	2		2						
Sea Captains			1		2	2	3	1				9	8	11	6	12	6	4	8	9	6
Seamen		5	3	3	9	7	8		1			36	28	42	37	34	20		16	29	24
Seamstresses		4		2		1	1	1				9	9	5	10	6	5	5	7	7	6
Secretaries													2	2							
Sextons			1		1	1						3	1	2	1	4	1	2			
Ship Builders					1	2						3		4	4	4	3	2	1	1	2
Ship Carpenters			1	1	2	2	2					8	5	4	1	10	2	4	2	4	7
Shoe Makers				4	6	9	15	14	2			30	63	54	69	54	50	50	47	40	39
Shop Workers	1											1	10	9							
Silversmiths					1	1						2	1	2							
Slaters													1	1							
Soldiers				1								1	2	1							
Spinners		3					1	1				5	3	3	2	2	1	1	6	4	2
Spoon Makers	1											1	7	1	7	3	2	2	1		
Station Agents			1				2					3	4	1							
Steam Fitters				1		1						2	3	2							
Stenographers	3	1										4	2	2	2						
Stevadores													1	2							
Stewards													1	1							
Stone Cutters		2	8	6	8	6	7	4				41	19	32	17	33	25	19	22	19	15
Students	16	5										21	25	20	26	7	27	25	11	18	31
Tailors, Tailoresses		3	1	6	2	14	5	5	1			37	28	23	38	27	26	16	32	20	25
Tanners							1					1	11	1	5	3	2	2	5		2
Tax Collectors							1					1	1								
Taxidermists													1	1							
Teachers		6	4	9	4	5	4	3				35	24	34	36	31	16	28	17	30	19
Teamsters		1	10	7	9	4	4	5	1			41	28	37	50	26	46	19	31	22	14
Teleg. Operators		1	2	2	2							7		5	4	5					1
Tinsmiths				1		1		1				3	13	5	11	10	9	7	8	4	1
Tobacco Sorters													1								
Tool Makers	1				1		1					3	1	12	3	3	3	6	3	1	1
Town Clerks													1		1						
Trav. Salesmen			1									1	6	5	4	6	3		9	4	3
Turners		1		1	1	1						4	1	1	2						
Undertakers						5		1				6	2	1	5	4	2	6		3	3
Upholsterers							2					2	3	4	3	2	2	2	1	2	
Varnishers					1							1	1		1	2	3	1	3		3
Venders														3							
Veterinary Surg.					3		1					4	2	3							
Wagonsmiths													4	2							
Waiters		2	1	1			1					5	6	7	3	2	8	10	7	7	4
Watchmakers			1	1	1							3									
Watchmen			1	1	5	1	2					10	14	7	13	7	16	6	9	13	6
Weavers	1	8	6	3	7	1	4					30	23	28	21	29	15	19	18	16	23
Well Diggers														1							
Wheel Makers														2							
Wheel Wrights													4	3	6	1	3	6	3	5	6
Wire Drawers		1	1	1	1	1						5	4	2	6	3	3	3	4	2	3
Wood Carvers													1	1							
Wood Choppers		1	1		1							3	2	2							
Wood Turners													3	2							
Wool Cutters		1										1									
Wool Sorters		1	1	1	3							6	1	2	3	2	1	1			1

TABLE XIII.  
VITAL STATISTICS OF THE COLORED POPULATION BY COUNTIES.

COUNTIES.	BIRTHS.										MARRIAGES.										DEATHS.																				
	Population.		Male.	Female.	Sex not stated.	Total 1895.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.	Average.	Male.	Female.	Sex not stated.	Total 1895.	1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.	Average.											
Hartford .....		45	28	2	75	55	67	57	76	48	68	60	61	62	62.9	31	29	28	28	39	24	29	24	26	32	32	29.0	16	32	...	48	73	75	59	60	56	66	51	55	50	59.3
New Haven ..		62	60	4	126	118	105	114	114	63	115	104	80	98	103.7	41	38	12	62	59	41	38	41	24	51	40.7	78	51	...	129	123	125	104	96	133	114	111	80	117	113.2	
New London ..		18	16	..	34	37	44	32	32	37	32	33	35	26	34.2	19	11	13	19	23	23	14	12	13	20	16.7	15	19	...	34	38	48	31	35	34	36	35	29	28	34.8	
Fairfield .....		30	35	1	66	63	62	63	50	50	58	50	43	55	56.0	36	40	27	31	39	23	16	26	26	18	28.2	37	36	3	76	61	76	69	55	62	66	56	74	66	66.1	
Windham .....		3	9	..	12	13	14	17	6	11	12	11	13	14	12.3	5	1	2	3	6	1	9	4	3	4	3.8	7	4	...	11	14	20	16	17	8	12	12	9	10	12.9	
Litchfield .....		10	4	1	15	16	18	16	14	10	23	9	21	15	15.7	9	6	7	8	5	10	7	5	5	5	6.7	12	5	...	17	22	19	27	26	29	16	20	28	15	21.9	
Middlesex .....		5	3	..	8	10	14	7	4	4	10	8	9	4	7.8	1	1	2	4	6	2	3	4	1	3	2.7	9	3	...	12	7	7	5	7	14	4	15	11	7	8.9	
Tolland .....		1	2	..	3	7	6	4	3	2	4	8	2	6	4.5	...	2	2	3	1	2	...	...	2	6	1.8	3	...	...	3	4	5	3	5	7	1	6	...	1	3.5	
Total .....		174	157	8	339	319	330	310	299	225	322	283	264	280	297.1	142	128	93	158	178	126	116	116	100	139	129.6	177	150	3	330	342	375	314	301	343	315	306	286	294	320.6	

NOTE.—In addition to the above there were mixed marriages: 13 in 1895; 10 in 1894; 4 in 1893; 6 in 1892; 7 in 1891; 8 in 1890; 6 in 1889; 8 in 1888; 3 in 1887.



TABLE XIV.  
DEATHS FROM MALARIAL\* FEVERS IN EACH TOWN, BY COUNTIES, CONTRASTED WITH THOSE FROM  
TYPHOID FEVER FOR A SERIES OF YEARS.

HARTFORD COUNTY.

TOWNS.	Population by Census.	1895.		1894.		1893.		1892.		1891.		1890.		1889.		1888.		1887.		1886.		1885.		1884.		1883.		1882.		Typhoid Fever.												
		Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.											
Hartford	62,000	4	38	2	32	10	28	3	46	4	39	5	30	3	26	4	26	2	8	7	21	9	21	9	21	28	3	12	4	30	27	13	11	22	22							
Avon	1,200						3		1												1		1									1	1	1	1							
Berlin	2,700						1		1			1		3	1	2		1			2											1		1	1							
Bloomfield	1,350	1					1				2		1																				1		1	1						
Bristol	8,100						3		1	5	1	3	5		4	1	4	4														1	7	4	1	3	4					
Burlington	1,300																																									
Canton	2,548														2	1	1	1			4		4		2								7	8		4	1					
East Granby	661																																				1	1				
East Hartford	5,000	1	2	1	3		3		8	1	4	1			1	2	1	2	4		1															3	4	1	1			
East Windsor	2,800						1		1		1							2																		1	1	1				
Enfield	7,199						1		4		2	1	3		5		3	2			1	3	5		4											1	1	1				
Farmington	3,000	1					1		2	1			1		2	1		1																		1	2	2	2			
Glastonbury	3,550	1					1				1		3			1	5	1	1	1		1	7		1												1	1	1			
Granby	1,250								1	1																											1	1	1			
Hartland	565																																				1	1	1			
Manchester	8,680	2							4	9	2	4	3	2	1	2	1	7	1	3		5															2	6	5	1	1	1
Marlborough	600																																					2		2		2
New Britain	22,000																																									
Newington	1,050	1							6	5	10	1	15	1	10	1	15	8			7		4																1	1	2	7
Plainville	2,000																																									
Rocky Hill	1,094																																									2
Simsbury	1,874	2																																								
Southington	5,500	1																																								
South Windsor	1,900																																									
Suffield	3,250	1																																								
West Hartford	2,000																																									
Wethersfield	2,300																																									
Windsor	3,254	2																																								
Windsor Locks	3,000																																									

\* Malarial is used for all the varieties—Intermittent, Remittent, etc., except Typho-Malarial.











TABLE XIV—CONTINUED. LITCHFIELD COUNTY.

TOWNS.	Population by Census.		1895.		1894.		1893.		1892.		1891.		1890.		1889.		1888.		1887.		1886.		1885.		1884.		1883.		1882.		Typhoid Fever.				
	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	1881.	1880.	1879.	1878.	1877.	
Litchfield	---	3	---	---	---	---	---	---	---	---	1	---	1	---	---	---	---	---	1	---	1	---	1	---	1	---	---	2	---	---	6	3	---		
Barkhamsted	---	---	2	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---		
Bethlehem	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Bridgewater	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Canaan	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Colebrook	---	---	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Cornwall	---	2	1	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	2	---	1	---	---	---	---	
Goshen	---	---	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	
Harwinton	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	2	---	---	---	---	---	1	---	---	---	---	---	---	
Kent	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---	---	---	
Morris	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---	1	---	---	---	---	---	---	
New Hartford	---	1	---	---	---	---	---	1	---	---	---	---	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
New Milford	---	3	1	---	---	---	---	---	---	---	1	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Norfolk	---	2	1	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
North Canaan	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Plymouth	---	---	---	---	---	---	---	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Roxbury	---	1	---	---	---	---	---	---	---	---	---	---	3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Salisbury	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Sharon	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Thomaston	---	1	---	---	---	---	---	---	---	---	---	4	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---
Torrington	---	1	1	---	---	---	---	1	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Warren	---	1	1	---	---	---	---	---	---	---	---	1	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Washington	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Watertown	---	1	2	---	---	---	---	5	---	---	---	---	2	---	---	---	---	---	---	---	---	2	3	---	---	---	---	---	---	---	---	---	---	---	
Winchester	---	3	2	3	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Woodbury	---	---	2	---	1	---	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

TABLE XIV—CONTINUED. MIDDLESEX COUNTY.

TOWNS.	Population by Census	1895.		1894.		1893.		1892.		1891.		1890.		1889.		1888.		1887.		1886.		1885.		1884.		1883.		1882.		TyphoidFever					
		Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	Typhoid.	Malarial.	1881.	1880.	1879.	1878.	1877.		
Middletown	17,160	1	2	1	4	5	9	1	4	--	5	21	2	--	1	4	2	1	2	1	4	2	1	4	2	6	3	2	3	2	5	6	2	1	3
Haddam	2,000	2	--	--	3	1	--	1	3	1	1	--	2	1	2	3	1	4	--	1	--	--	--	--	1	1	1	1	1	6	1	--	1	1	
Chatham	1,949	--	--	--	--	1	--	--	--	1	1	3	--	--	--	--	--	--	--	--	2	--	--	--	--	1	--	--	1	1	2	1	2	--	
Chester	1,233	--	--	--	--	--	--	--	--	2	--	1	1	1	1	--	--	--	--	--	--	--	--	--	--	--	1	1	1	1	1	1	1	1	--
Clinton	1,400	--	--	--	--	--	--	--	1	1	2	3	1	1	1	1	2	--	1	1	1	1	--	--	1	1	1	2	--	--	--	--	--	1	
Cromwell	2,316	--	--	2	--	2	--	--	3	2	2	4	1	1	1	--	1	1	1	2	2	2	1	--	1	1	1	--	--	1	1	2	1	3	
Durham	934	--	--	2	--	1	--	1	1	1	1	1	--	1	1	1	1	1	1	1	1	2	1	--	1	1	2	--	2	1	1	1	2	--	
East Haddam	2,600	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	--	1	1	1	2	1	2	1	2	1	2	3
Essex	2,000	1	--	1	1	1	1	1	1	1	1	1	1	1	1	5	1	1	1	1	--	1	--	--	1	1	1	1	3	1	1	1	1	2	
Killingworth	540	--	--	--	1	--	1	--	1	1	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3	1	1	1	1	1	1	2	
Middlefield	977	1	--	--	--	--	--	--	--	1	1	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	2
Old Saybrook	1,450	--	--	2	1	--	--	--	1	3	1	--	--	--	--	--	--	--	--	--	1	--	--	--	--	--	1	1	1	1	1	1	1	--	2
Portland	4,400	1	--	3	--	--	--	--	2	1	2	1	1	2	3	5	4	5	--	--	--	8	1	--	3	1	2	1	6	2	2	2	4	3	
Saybrook	1,484	--	--	--	--	1	--	1	1	3	--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	2	1	2	1	1	1	1	1	2
Westbrook	874	--	--	--	--	--	--	--	1	1	--	--	--	--	1	--	--	--	--	--	--	--	--	--	1	--	1	--	2	3	1	2	1	1	2



## BIRTHS, 1895.

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There were registered during the year 1895, in the State of Connecticut, 19,931 births, of which 19,106 were born alive and 825 were still-born.

As compared with the year before there were 387 less living births and 27 less still-births reported.

Of the whole number of births of which the sex was certified, 10,240 were males, 9,555 were females, while in regard to 136 the sex were not stated, 12 less than in the year before.

The birth-rate was almost the same as in the year before, being 24.4 in 1,000 of the population. The previous year it was 24.9.

The counties maintain about the same relations to each other as they did in 1894—New Haven County having the highest birth-rate and Litchfield County the lowest.

Of the total births in the State only 41.4 per cent. were of native parents; of the remainder, 57.2 were born of parents of whom one or both were foreigners, and of 251 births, or 1.2 per cent., the nationality was not stated.

New Haven County had the largest birth-rate, viz: 28.4 per cent., and foreign-born parents, to wit, 47.0 per cent.

Litchfield County had the lowest birth-rate, 20.2.

Of Hartford County 43.1 per cent. were of foreign-born parents.

Of New London County 35.5 per cent. were of foreign-born parents.

Of Fairfield County 37.9 per cent. were of foreign-born parents.

Of Windham County 40.9 per cent. were of foreign-born parents.

Of Litchfield County 30.9 per cent. were of foreign-born parents.

Of Middlesex County 36.2 per cent. were of foreign-born parents.

Of Tolland County 35.1 per cent. were of foreign-born parents.

Of the State 41.4 per cent. were registered as both of foreign-born parents, and exactly the same per cent. of native parents; there were 15.8 per cent. of one native and one foreign-born parent; while 1.2 per cent. the nationality of parents was not stated.

Of the sexes registered, the proportion of boys to girls was 107.1 to 100 girls, against 111.0 of the previous year.

The proportion of births to the whole estimated population of the State (viz. 816,712) was 1 to 40.9 of the people or 24.4 per 1,000.

The towns having the highest birth-rate are in New Haven County, namely, Naugatuck, 38.9 ; Waterbury, 34.1 ; and Beacon Falls, 34.0.

The greatest number of births in any one month occurred in September, 1,803. The smallest number in November, 1,508.

The largest number of males was born in January and July, each 922. The largest number of females in September, 868.

In the first quarter of the year the birth-rate was 25.3.

In the second quarter of the year the birth-rate was 23.2.

In the third quarter of the year the birth-rate was 26.0.

In the fourth quarter of the year the birth-rate was 23.0.

The birth-rate in the State was 24.4.

In Hartford County the town having the highest birth-rate was Windsor Locks, 31.3. Bloomfield had the lowest birth-rate, 10.4.

In New Haven County Naugatuck had the highest birth-rate, 38.9. Bethany had the lowest birth-rate, 10.9.

In New London County the highest birth-rate was in Griswold, 28.2. The lowest in Ledyard, 7.6.

In Fairfield County Stamford exceeded the other towns with a birth-rate of 27.5, and Sherman had the smallest, 13.4.

In Windham County Putnam took the honors, birth-rate 29.3 ; the lowest was in Scotland, 4.0.

Litchfield County's highest was Bridgewater, 31.6, and the lowest was Colebrook, 10.9.

In Middlesex County Portland took the lead, birth-rate 29.5, and Durham was lowest, 12.8.

In Tolland County Columbia gave 26.4, and Union 10.0.



TABLE XV.—SHOWING AMERICAN AND FOREIGN PARENTAGE OF BIRTHS BY COUNTIES, 1895.

COUNTIES.	PARENTS.				Nativity of Parents not Stated.	Total.
	Both American.	Both Foreign.	Father For., Mother Am.	Father Am., Mother For.		
Hartford .....	1,547	1,685	333	318	18	3,901
New Haven .....	2,445	3,168	583	471	65	6,732
New London .....	828	615	150	132	3	1,728
Fairfield .....	1,748	1,508	296	277	149	3,978
Windham .....	380	415	117	92	9	1,013
Litchfield .....	645	362	82	81	1	1,171
Middlesex .....	440	319	67	52	1	879
Tolland .....	235	186	68	35	5	529
Total .....	8,268	8,258	1,696	1,458	251	19,931

TABLE XVI.—SHOWING NATIVITY OF PARENTAGE AND PERCENTAGE.

Years.	American Parents.	Per cent.	Foreign Parents.	Per cent.	Foreign American.	Per cent.	Not stated.	Per cent.	Total Births.
1895 .....	8,268	41.4	8,258	41.4	3,154	15.8	251	1.2	19,931
1894 .....	8,510	43.2	8,380	41.1	3,196	15.7	259	1.3	20,345
1893 .....	8,487	41.8	8,298	40.8	3,169	15.6	342	1.6	20,296
1892 .....	8,346	42.2	7,907	40.0	3,120	15.7	377	1.9	19,750
1891 .....	8,074	43.5	7,268	39.1	2,881	15.5	335	1.8	18,558
1890 .....	7,596	43.6	6,528	37.5	2,770	15.9	500	2.8	17,394
1889 .....	7,831	45.5	6,361	37.0	2,621	15.2	363	2.1	17,176
1888 .....	7,640	45.2	6,039	35.7	2,615	15.4	584	3.4	16,878
1887 .....	7,551	45.5	5,735	34.5	2,541	15.3	756	4.5	16,583
1886 .....	7,437	46.6	5,498	34.5	2,503	15.7	496	3.1	15,934

From the foregoing tables it appears that of the children born in Connecticut in 1895, the nativity of whose parentage is registered, 41.4 per cent. were of American parentage, and

in 41.4 per cent. both parents were of foreign birth. In 15.8 per cent. one parent was American and the other of foreign birth. In 1.2 per cent. of the births the nativity of the parentage is not registered.

TABLE XVII.—ILLEGITIMATE BIRTHS BY MONTHS AND SEX, 1895.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mo. not stated.	Total.
Males .....	8	7	8	10	10	5	6	5	11	6	1	8	1	86
Females .....	15	6	6	4	10	6	6	8	8	4	2	8	---	83
Sex not stated .....	---	1	2	---	---	---	---	---	---	---	---	---	---	3
Total .....	23	14	16	14	20	11	12	13	19	10	3	16	1	172

The table of illegitimate births can only be considered an approximation to the real facts. The many reasons for avoiding the record, or suppressing the facts of illegitimacy, much impair its value for accuracy.

TABLE XVIII.—TWIN-BIRTHS BY MONTHS AND SEX, 1895.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mo. not stated.	Total.
Males .....	22	10	18	24	20	16	14	16	21	16	16	14	---	207
Females .....	19	10	14	8	14	14	14	8	13	16	14	12	---	156
Sex not stated .....	---	---	---	---	---	---	---	---	---	---	---	3	---	3
Total .....	41	20	32	32	34	30	28	24	34	32	30	29	---	366

TABLE XIX.—PLURALITY BIRTHS, 1895. BY TOWNS.

(Included in Tables I, II, III.)

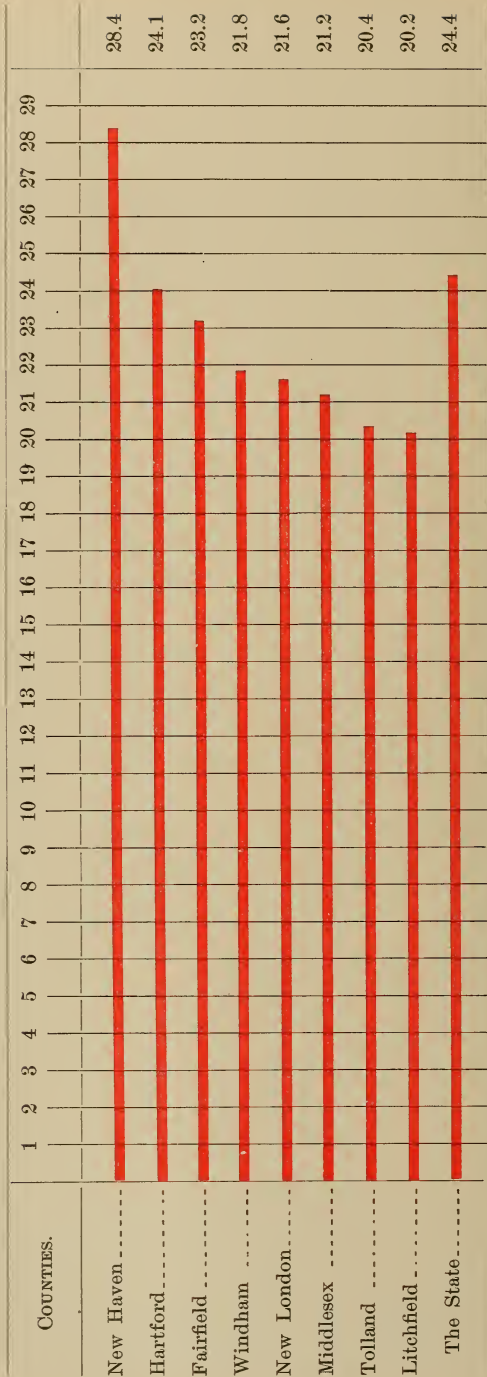
## HARTFORD COUNTY.

TOWNS.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Hartford -----	Males -----			2		1	2		2		2	1	1	11
	Females -----	2		4	2	1	4	6				1	1	21
Berlin -----	Males -----						2							2
	Females -----													
Bristol -----	Males -----										1			1
	Females -----										1			1
Canton -----	Males -----	1	1											2
	Females -----	1	1											2
East Hartford ----	Males -----													
	Females -----											2		2
Enfield -----	Males -----								2			1		3
	Females -----											1		1
Farmington -----	Males -----									2				2
	Females -----								2					2
Glastonbury -----	Males -----													
	Females -----		2											2
New Britain -----	Males -----							2			1		3	6
	Females -----										1		1	2
Southington -----	Males -----										1			1
	Females -----										1			1
West Hartford ----	Males -----													
	Females -----		2											2
Total -----		4	6	6	2	2	8	8	6	2	8	6	6	64



# BIRTH RATE, 1895.

DIAGRAM A, SHOWING THE NUMBER OF BIRTHS TO EACH 1000 OF THE POPULATION BY COUNTIES.





BIRTH RATE, 1895.

DIAGRAM B, SHOWING THE RATE OF BIRTHS TO EACH 1000 OF THE POPULATION IN EVERY TOWN OF OVER 5000 INHABITANTS, AND OF THE REMAINDER OF THE STATE.





TABLE XIX.—CONTINUED. NEW HAVEN COUNTY.

TOWNS.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
New Haven	Males	4	7	2	10	2	2	4	1	2	2	1	37	
	Females	4	2	3	6	4	—	—	1	2	2	1	25	
Ansonia	Males	—	—	1	—	—	—	—	2	1	—	—	4	
	Females	—	—	1	—	—	—	2	—	1	—	—	4	
Branford	Males	—	2	—	—	—	—	—	—	—	2	—	4	
	Females	—	—	—	—	—	2	—	—	—	—	—	2	
Hamden	Males	1	—	—	—	—	—	—	—	2	—	—	3	
	Females	1	—	—	—	—	—	—	—	—	—	—	1	
Meriden	Males	—	—	—	—	—	2	—	—	—	—	—	2	
	Females	—	—	—	—	—	—	—	—	2	—	—	2	
Milford	Males	—	—	—	—	—	—	2	—	—	—	—	2	
	Females	—	—	—	—	—	—	—	—	—	—	2	2	
Naugatuck	Males	—	—	—	—	2	—	—	—	—	—	—	2	
	Females	—	—	—	—	—	—	—	—	—	—	2	4	
North Haven	Males	2	—	—	—	—	—	—	—	2	—	—	4	
	Females	—	—	—	—	—	—	—	—	—	—	—	—	
Orange	Males	—	—	—	—	—	—	1	2	—	—	—	3	
	Females	2	—	—	—	—	—	1	2	—	—	—	5	
Southbury	Males	—	—	—	—	—	—	—	—	—	—	—	—	
	Females	—	—	—	—	2	—	—	—	—	—	—	2	
Waterbury	Males	—	1	1	7	—	—	—	2	—	4	2	17	
	Females	—	1	1	1	—	—	—	2	—	4	—	9	
Total		14	6	12	12	20	8	6	8	14	10	14	8	132

## NEW LONDON COUNTY.

New London	Males	2	2	2				2			8
	Females							2			2
Bozrah	Males	2							1		3
	Females								1		1
Griswold	Males					1					1
	Females					1					1
Norwich	Males			2	1	1		1	2		7
	Females			2	1	1		1			5
Old Lyme	Males										
	Females									2	2
Preston	Males			2							2
	Females										
Stonington	Males							2			2
	Females	2									2
Waterford	Males			1			1				2
	Females			1			1				2
Total		4	2	8	4	2	4	2	8	4	40

TABLE XIX.—CONTINUED. FAIRFIELD COUNTY.

TOWNS.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Danbury .....	Males .....	—	—	—	2	—	—	—	2	—	—	—	—	4
	Females .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Bridgeport .....	Males .....	—	2	1	3	2	1	4	—	—	2	4	—	19
	Females .....	—	—	3	3	—	1	2	2	—	2	4	2	19
Bethel .....	Males .....	—	—	—	—	—	1	—	—	—	—	—	—	1
	Females .....	—	—	—	—	—	1	—	—	—	—	—	—	1
Easton .....	Males .....	—	—	2	—	—	—	—	—	—	—	—	—	2
	Females .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Huntington .....	Males .....	—	—	—	2	—	—	—	—	—	—	—	—	2
	Females .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Monroe .....	Males .....	2	—	—	—	—	—	—	—	—	—	—	—	2
	Females .....	2	—	—	—	—	—	—	—	—	—	—	—	2
Newtown .....	Males .....	—	—	—	—	—	—	—	—	1	—	—	—	1
	Females .....	—	—	—	—	2	—	—	—	3	—	—	—	5
Norwalk .....	Males .....	2	2	—	—	—	—	—	2	1	—	—	1	8
	Females .....	—	—	—	—	—	—	—	—	1	—	—	1	2
Stamford .....	Males .....	1	—	—	—	—	—	—	1	—	—	—	1	3
	Females .....	1	—	—	—	—	—	—	1	—	—	—	1	3
Trumbull .....	Males .....	—	—	—	1	—	—	—	—	—	—	—	—	1
	Females .....	—	—	—	1	—	—	—	—	—	—	—	—	1
Westport .....	Males .....	1	—	—	—	—	—	—	—	—	—	—	—	1
	Females .....	1	—	—	—	—	—	—	—	—	—	—	—	1
Wilton .....	Males .....	—	—	—	—	—	—	2	—	—	—	—	—	2
	Females .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Total .....		10	4	6	10	4	4	8	6	6	4	8	6	76

## WINDHAM COUNTY.

Brooklyn .....	Males .....	—	—	—	—	—	2	—	—	—	—	—	—	2
	Females .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Killingly .....	Males .....	—	—	—	—	—	—	—	—	—	—	—	—	—
	Females .....	—	2	—	—	—	—	—	—	—	—	—	—	2
Putnam .....	Males .....	—	—	—	—	—	—	—	—	—	—	2	—	2
	Females .....	—	—	—	—	—	—	—	—	—	—	—	—	—
Thompson .....	Males .....	1	—	—	1	1	—	—	—	—	—	—	—	3
	Females .....	1	—	—	1	1	—	—	—	—	—	—	—	3
Windham .....	Males .....	—	—	—	—	—	1	—	—	—	—	—	—	1
	Females .....	—	—	—	—	—	1	—	—	—	—	—	—	1
Woodstock .....	Males .....	—	—	—	—	—	—	—	—	—	—	—	—	—
	Females .....	—	—	—	—	—	—	2	—	—	—	—	—	2
Total .....		2	2	—	2	2	4	2	—	—	—	—	2	16

TABLE XIX.—CONTINUED. LITCHFIELD COUNTY.

TOWNS.	SEX.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Litchfield .....	Males .....							1						1
	Females .....							1						1
New Milford .....	Males .....									1				1
	Females .....									1	2			3
Salisbury .....	Males .....													
	Females .....										2			2
Torrington .....	Males .....													
	Females .....													
	Not stated .....											3		3
Winchester .....	Males .....									2	1			3
	Females .....										1			1
Total .....								2		4	6		3	15

## MIDDLESEX COUNTY.

Middletown .....	Males .....													
	Females .....								2					2
Haddam .....	Males .....				1									1
	Females .....				1									1
Cromwell .....	Males .....						1							1
	Females .....						1							1
Essex .....	Males .....	1												1
	Females .....	1												1
Portland .....	Males .....	3							2					5
	Females .....													
Total .....		5			2		2		4					13

## TOLLAND COUNTY.

Tolland .....	Males .....											2		2
	Females .....													
Columbia .....	Males .....											2		2
	Females .....													
Stafford .....	Males .....					1								1
	Females .....					1								1
Vernon .....	Males .....	1				2								3
	Females .....	1												1
Total .....		2				4						2	2	10



TABLE XX.—PLURALITY BIRTHS, 1895. BY COUNTIES.

(Included in Tables I, II, III, IV.)

COUNTIES.	SEX.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Hartford -----	Males .....	1	1	2	..	1	4	2	4	2	5	2	4	28
	Females .....	3	5	4	2	1	4	6	2	..	3	4	2	36
	Total .....	4	6	6	2	2	8	8	6	2	8	6	6	64
New Haven -----	Males .....	7	3	8	10	12	4	4	5	9	5	8	5	80
	Females .....	7	3	4	2	8	4	2	3	5	5	6	3	52
	Total .....	14	6	12	12	20	8	6	8	14	10	14	8	132
New London -----	Males .....	2	2	5	4	1	2	1	..	5	3	..	..	25
	Females .....	2	..	3	..	1	2	1	..	3	1	..	2	15
	Total .....	4	2	8	4	2	4	2	..	8	4	..	2	40
Fairfield -----	Males .....	6	4	3	8	2	2	6	5	2	2	4	1	45
	Females .....	4	..	3	2	2	2	2	1	4	2	4	5	31
	Total .....	10	4	6	10	4	4	8	6	6	4	8	6	76
Windham -----	Males .....	1	..	..	1	1	3	..	..	..	..	..	2	8
	Females .....	1	2	..	1	1	1	2	..	..	..	..	..	8
	Total .....	2	2	..	2	2	4	2	..	..	..	..	2	16
Litchfield -----	Males .....	..	..	..	..	..	..	1	..	3	1	..	..	5
	Females .....	..	..	..	..	..	..	1	..	1	5	..	..	7
	Sex not stated .....	..	..	..	..	..	..	..	..	..	..	3	..	3
	Total .....	..	..	..	..	..	..	2	..	4	6	..	3	15
Middlesex -----	Males .....	4	..	..	1	..	1	..	2	..	..	..	..	8
	Females .....	1	..	..	1	..	1	..	2	..	..	..	..	5
	Total .....	5	..	..	2	..	2	..	4	..	..	..	..	13
Tolland -----	Males .....	1	..	..	..	3	..	..	..	..	..	2	2	8
	Females .....	1	..	..	..	1	..	..	..	..	..	..	..	2
	Total .....	2	..	..	..	4	..	..	..	..	..	2	2	10
Grand Total .....		41	20	32	32	34	30	28	24	34	32	30	29	366

TABLE XXI.—TWINS AND ILLEGITIMATE BIRTHS BY COUNTIES FOR THE PAST TEN YEARS, WITH SEXES FOR 1895.

COUNTIES.	1895.										1894.	1893.	1892.	1891.	1890.	1889.	1888.	1887.	1886.	TOTAL FOR 10 YEARS.	AVERAGE FOR 10 YEARS.										
	TWINS.					ILLEGIT.					Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.											
	Males.	Females.	Sex not stat'd.	Total.	Males.	Females.	Sex not stat'd.	Total.	Twins.	Twins.											Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.	Twins.
Hartford .....	28	36	--	64	19	17	--	36	58	41	+73	44	78	40	+81	39	+51	49	64	43	+76	34	74	27	64	42	683	395	68.3	39.5	
New Haven .....	80	52	--	132	30	32	2	64	184	48	84	53	114	61	*92	67	110	42	108	57	72	59	94	52	76	44	1066	547	106.6	54.7	
New London .....	25	15	--	40	11	8	--	19	32	19	+49	24	34	16	32	17	30	14	24	20	32	20	30	28	24	24	327	201	32.7	20.1	
Fairfield .....	45	31	--	76	14	13	--	27	60	27	72	49	+93	43	58	30	+63	27	62	23	+53	29	50	25	26	22	613	302	61.3	30.2	
Windham .....	8	8	--	16	2	5	--	7	24	13	4	10	18	8	4	5	6	12	18	11	4	7	10	8	16	4	120	85	12.0	8.5	
Litchfield .....	5	7	3	+15	4	2	--	6	32	10	12	15	24	5	30	14	16	8	24	19	12	6	22	9	16	9	203	101	20.3	10.1	
Middlesex .....	8	5	--	13	4	3	--	7	18	5	28	8	22	10	12	7	14	7	+27	13	+29	6	14	7	+9	4	186	74	18.6	7.4	
Tolland .....	8	2	--	10	2	3	1	6	18	3	10	5	18	13	10	6	10	6	8	3	12	7	10	8	14	2	120	59	12.0	5.9	
Total .....	207	156	3	366	86	83	3	172	426	166	332	208	401	196	319	185	300	165	335	189	290	168	304	164	245	151	3318	1764	331.8	176.4	

\* Includes two sets of triplets.

† Includes one set of triplets.

The following table exhibits the rate of illegitimate births to every 1,000 by counties:

Hartford County,	9.2	to	1,000	births.
New Haven “	9.5	“	“	“
New London “	10.9	“	“	“
Fairfield “	6.7	“	“	“
Windham “	6.9	“	“	“
Litchfield “	5.1	“	“	“
Middlesex “	7.9	“	“	“
Tolland “	11.3	“	“	“
The State, “	8.6	“	“	“

TABLE XXII.—STILL-BIRTHS, 1895.

WHITE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mo. not stated.	Total.
Males.....	52	44	39	30	37	32	34	34	35	34	41	44	1	457
Females.....	32	30	26	33	30	24	26	20	34	19	32	37	2	347
Sex not stated .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
COLORED.														
Males.....	1	1	5	1	1	—	—	1	2	3	—	—	—	15
Females.....	1	—	—	1	1	1	—	—	1	1	—	—	—	6
Sex not stated .....	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Grand Total .....	86	75	70	65	69	57	60	55	72	57	75	81	3	825

The number of still-births registered in the State was 825, which is one to every 23.1 of living births.

There were 472 males and 353 females, of which 15 males and 6 females were colored.

The proportion of still-births among whites is about two-thirds what it is among negroes.

Of course the registration of still-births is far from complete.

TABLE XXIII—SHOWING A NATIONALITY OF PARENTS BY COUNTIES.

COUNTIES.	American.	Irish.	English.	German.	Canadian.	Scotch.	Welsh.	French.	Spanish.	Italian.	Swiss.	Austrian.	Belgian.	Hungarian.	Prussian.	Bohemian.	Danish.	Swedish.	Polish.	Norwegian.	Finland.	Russian.	Portuguese.	Newfoundland.	American and Foreign.	Mixed Foreign.	Other Foreign Countries.	Not stated.
Hartford	1547	429	73	242	99	30	---	7	---	145	7	12	---	3	3	2	35	216	33	1	---	207	1	1	651	125	14	18
New Haven	2445	868	124	467	202	36	3	12	---	426	5	27	1	10	---	---	18	214	32	2	13	383	1	---	1054	253	72	65
New London	828	161	39	65	134	17	---	2	---	21	1	---	---	2	---	---	3	21	---	---	---	82	22	---	282	43	1	3
Fairfield	1748	402	97	194	20	16	1	6	---	135	---	13	---	42	---	1	7	102	9	4	1	64	---	1	573	322	71	149
Windham	380	33	6	3	314	7	---	3	---	---	---	1	---	---	---	---	---	25	---	---	1	1	---	---	209	17	4	9
Litchfield	645	84	27	52	40	5	---	17	---	16	2	1	---	2	---	---	2	27	4	1	---	26	---	---	163	40	16	1
Middlesex	440	39	12	38	7	5	---	1	---	10	---	4	---	2	1	3	4	122	7	---	---	25	---	---	119	34	5	1
Tolland	235	15	15	70	37	2	1	---	---	3	4	1	---	---	---	---	4	1	---	8	---	7	---	---	106	14	1	5
Total, 1895	8268	2031	393	1131	853	118	5	48	---	755	19	59	1	61	4	6	73	728	93	8	16	795	24	2	3157	848	184	251
1894	8510	2131	439	1166	939	127	5	42	1	704	23	280	2	56	5	1	74	744	80	10	8	657	24	9	3196	685	168	259
1893	8487	2162	453	1216	964	136	7	48	2	643	17	286	---	34	3	3	89	729	61	6	9	654	22	---	3169	625	129	342
1892	8372	2158	169	1208	1005	123	9	49	---	590	20	142	---	99	8	11	79	649	57	10	14	532	19	---	3120	615	67	324
1891	8074	2161	424	1140	862	97	9	39	---	458	24	175	2	70	---	10	34	540	63	12	12	377	18	5	2881	638	98	335
1890	7596	2021	410	1093	846	131	11	20	1	322	20	112	---	53	6	13	66	504	45	7	6	249	11	3	2770	545	33	500
1889	7831	2034	384	1133	820	89	7	18	---	267	27	59	4	37	4	17	53	467	29	9	4	220	21	---	2619	535	115	363
1888	7640	2181	369	1044	818	103	6	25	---	200	13	25	---	32	1	4	41	388	23	7	8	136	8	---	2615	501	105	584
1887	7541	2157	344	1063	817	76	8	20	---	158	28	6	1	38	4	3	29	320	7	15	1	83	14	---	2541	437	116	756
1886	7441	2140	323	1028	781	87	7	45	---	112	19	8	1	15	2	6	40	260	15	11	---	55	15	---	2590	497	44	495

TABLE XXIV.—BIRTH-RATE BY COUNTIES FOR 10 YEARS.

COUNTIES.	YEAR.									
	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886
Hartford.....	24.1	24.1	25.4	23.9	23.7	21.8	22.4	22.5	22.8	23.1
New Haven .....	28.4	28.6	29.5	28.7	28.6	26.7	27.7	26.3	26.3	25.6
New London .....	21.6	22.0	22.5	21.9	21.7	20.4	20.1	20.4	19.9	19.8
Fairfield.....	23.2	24.9	25.6	25.4	25.8	24.6	23.0	22.0	23.1	21.9
Windham .....	21.8	25.9	22.1	23.6	21.8	21.9	21.8	18.9	20.6	20.9
Litchfield .....	20.2	21.0	19.5	19.1	20.2	19.1	18.8	16.3	18.3	17.1
Middlesex.....	21.2	20.3	21.4	20.0	22.7	20.1	20.7	18.6	20.1	19.4
Tolland .....	20.4	20.2	22.6	22.1	21.8	20.6	22.1	18.3	19.6	18.5
State of Connecticut.....	24.4	24.9	25.4	24.7	24.8	23.3	23.4	22.2	22.8	22.2



## MARRIAGES.

There were 6,623 marriages registered during the year 1895, being 793 more than in 1894.

This is one marriage to every 123.3 of the living population, or a marriage rate of 8.1 per 1,000, or 16.2 persons to a 1,000.

TABLE XXV.—MARRIAGES.

BRIDES.		12-15.	15-20.	20-30.	30-40.	40-50.	50-60.	60-70.	70-80.	80-90.	Age not stated.	Total.
First Marriage	----	1	1,027	4,276	509	63	17	2	-----	-----	-----	5,895
Second	“	-----	7	190	245	163	57	17	2	1	1	683
Third	“	-----	-----	1	12	15	8	5	1	-----	-----	42
Fourth	“	-----	-----	-----	-----	1	2	-----	-----	-----	-----	3
Fifth	“	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total, 1895	-----	1	1,034	4,467	766	242	84	24	3	1	1	6,623
1894	-----	2	862	3,983	671	213	75	22	2	-----	-----	5,830
1893	-----	1	993	4,418	742	202	73	22	4	-----	4	6,459
1892	-----	1	1,014	4,517	761	206	47	45	4	-----	1	6,596
1891	-----	1	998	4,460	749	190	71	22	3	-----	-----	6,494
1890	-----	1	939	4,325	735	188	72	18	4	-----	2	6,284
1889	-----	-----	835	3,955	654	205	69	18	8	-----	-----	5,744
1888	-----	1	897	4,144	627	191	82	25	-----	-----	2	5,969
1887	-----	2	876	3,977	642	209	56	19	1	-----	6	5,788
1886	-----	1	840	3,791	604	185	58	21	9	-----	3	5,512
GROOMS.												
First Marriage	---	-----	123	4,454	974	121	17	1	2	-----	-----	5,692
Second	“	-----	-----	103	325	230	125	58	13	-----	-----	854
Third	“	-----	-----	1	12	24	18	10	3	-----	-----	68
Fourth	“	-----	-----	-----	-----	-----	3	2	1	-----	-----	6
Fifth	“	-----	-----	-----	-----	-----	-----	1	1	1	-----	3
Total, 1895	-----	-----	123	4,558	1,211	375	163	72	20	1	-----	6,623
1894	-----	-----	110	3,922	1,194	362	150	71	17	2	2	5,830
1893	-----	-----	127	4,447	1,240	386	153	85	15	2	4	6,459
1892	-----	-----	119	4,594	1,270	356	159	73	24	1	-----	6,596
1891	-----	-----	115	4,525	1,257	374	139	60	22	1	1	6,494
1890	-----	-----	147	4,240	1,252	379	144	94	18	3	7	6,284
1889	-----	-----	101	3,865	1,175	346	152	84	18	3	-----	5,744
1888	-----	-----	115	4,129	1,142	311	163	73	14	3	19	5,969
1887	-----	-----	108	3,979	1,090	320	150	79	16	1	45	5,788
1886	-----	-----	108	3,764	1,059	316	149	75	29	-----	12	5,512

The number of persons who were married in each County in 1895 were to every 1,000 of the population as follows :

Hartford County,	18.2	New Haven County,	17.2
New London County,	15.4	Fairfield County,	14.7
Windham County,	16.5	Litchfield County,	13.0
Middlesex County.	13.7	Tolland County,	16.6

It will be observed that Hartford County shows the highest marriage rate, and Litchfield the lowest.

The number of persons who were married in 1894 in each County were to every 1,000 of the population as follows :

Hartford County, 15.3 ; New Haven County, 15.2 ; New London County, 14.2 ; Fairfield County, 12.9 ; Windham County, 13.7 ; Litchfield County, 13.5 ; Middlesex County, 11.3 ; Tolland County, 15.2.

*First Marriages and Re-marriages.*—The marriages of bachelors and spinsters constituted 87.4 per cent. of the total ; those of widowers and widows 12.5 per cent.

Of the males married in the year, 1.8 per cent. were boys under 20 years old.

Of the females under 20 there were 15.6 per cent., and of those 7 were already widows.

Table XXV exhibits more in detail the foregoing facts.

TABLE XXVI.—COMPARATIVE AGES OF AMERICAN AND FOREIGN-BORN MOTHERS.

[illegible]

TABLE XXVII.—DIVORCES GRANTED IN THE STATE OF CONNECTICUT BY THE SUPERIOR COURT DURING 1895.

CAUSES.	Hartford County.	New Haven County.	New London County.	Fairfield County.	Windham County.	Litchfield County.	Middlesex County.	Tolland County.	Total.
Adultery .....	12	26	11	19	2	6	1	1	78
Adultery and cruelty .....									
Adultery and desertion .....	1	1	1						3
Adultery and intemperance .....									
Bigamy .....	1			1					2
Cruelty .....	8	21	11	15	2	3	3	1	64
Cruelty and desertion .....		1							1
Cruelty and intemperance .....	8	5	1	5			1	1	21
Desertion .....	30	46	23	47	4	7	7	5	169
Desertion and intemperance .....	1								1
Intemperance .....	13	24	7	17	2	8	2		73
Life sentence in State Prison .....	1								1
Infamous crime .....		2							2
Corporal imbecility .....		1							1
Fraudulent contract .....				1					1
Total .....	75	127	54	105	10	24	14	8	417

TABLE XXVIII.—DIVORCES FOR PAST 10 YEARS.

COUNTIES.	1895	1894	1893	1892	1891	1890	1889	1888	1887	1886
Hartford .....	75	93	62	76	104	76	93	81	69	80
New Haven .....	127	69	110	128	122	166	150	136	107	103
New London .....	54	33	46	59	43	54	62	61	45	43
Fairfield .....	105	88	107	132	98	94	146	65	71	63
Windham .....	10	27	10	27	24	39	21	17	33	38
Litchfield .....	24	32	26	37	43	23	29	33	22	24
Middlesex .....	14	13	15	19	22	9	12	16	12	12
Tolland .....	8	12	14	23	19	16	23	21	28	24
Total .....	417	367	390	501	475	477	536	430	387	387

TABLE XXIX.—SHOWING THE NUMBER OF DIVORCED PERSONS WHO HAVE RE-MARRIED IN 1895. BY COUNTIES.

COUNTIES.	Women.	Men.	
Hartford .....	42	22	During the year 1895 there were 417 divorces granted, or 834 individuals divorced, and during the year there were 293 divorced persons who were married again.
New Haven .....	50	32	
New London .....	20	20	
Fairfield .....	34	25	
Windham .....	10	7	
Litchfield .....	11	9	
Middlesex .....	2	2	
Tolland .....	3	4	
Total .....	172	121	

TABLE XXX.—SHOWING THE NUMBER OF WIDOWS AND WIDOWERS WHO HAVE RE-MARRIED IN 1895. BY COUNTIES.

COUNTIES.	Widows.	Widowers.	
Hartford .....	120	189	There were 250 more widowers who were re-married than widows last year. But among divorced persons there were 51 more women than men who were not intimidated by experience from repeating the matrimonial venture.
New Haven .....	170	238	
New London .....	58	78	
Fairfield .....	98	139	
Windham .....	42	56	
Litchfield .....	25	47	
Middlesex .....	28	34	
Tolland .....	21	31	
Total .....	562	812	



## DEATHS.

The registered mortality in 1895, exclusive of still births, numbered 14,546, which was 847 more than in the preceding year.

Upon the estimated population of 816,712 the death rate was 17.8 per 1000 living population.

The deaths of males on record numbered 7,418; of females, 7,114; of 14 decedents the sex is not recorded.

The greatest mortality was registered in March and reached 1,443.

The smallest mortality was in June, amounting to 986.

The annual rates represented by the deaths registered in each quarter were as follows :

			Total Deaths.
First quarter,	19.1	per 1,000 of living population,	3,883
Second " "	16.3	" "	3,328
Third " "	19.3	" "	3,958
Fourth " "	16.5	" "	3,377
			<hr/>
			14,546

The annual death rate was 17.8.

## CAUSES OF DEATH.

The number of deaths registered, of which no cause was given in 1895, was 22 out of a total of 14,546, being 0.15 of total mortality.

This result is in strong contrast with the registration of former years, when the omitted causes of death numbered annually five or six hundred.

Among so many thousand deaths there will inevitably occur a small percentage respecting which the causes cannot be ascertained.

The following table shows the steady improvement in regard to this item of registration :

DEATHS FROM UNKNOWN OR UNSPECIFIED CAUSES OF  
DEATHS AND PERCENTAGES, 1878-1895 (18 YEARS).

Year.	Total.	Deaths from causes not stated.	Percentage of Total Mortality.
1878	9,352	624	6.6
1879	9,394	545	5.8
1880	10,408	536	5.1
1881	10,907	502	4.6
1882	11,662	390	3.3
1883	11,926	369	3.1
1884	11,351	377	3.4
1885	12,033	437	3.6
1886	11,616	305	2.6
1887	12,385	215	1.7
1888	12,980	99	.8
1889	12,529	71	.5
1890	13,665	33	.2
1891	14,385	38	.2
1892	15,170	26	.3
1893	14,901	30	.2
1894	13,699	32	.2
1895	14,546	22	.1

## CAUSES OF DEATHS CONSIDERED BY CLASSES.

## CLASS I.—ZYMOTIC DISEASES.

The deaths from zymotic diseases registered in 1895 amounted to 2,743 or 18.85 per cent of the whole mortality; the deaths from this class of diseases were 45 more than in the year before.

From the causes of death as registered under the different classes, the percentage of each was as follows :

	Deaths.	Percentage of Total Mortality.
From the Zymotic .....	2,743	18.85
" Parasitic .....	3	
" Dietetic .....	62	.42
" Constitutional .....	2,435	16.74
" Developmental .....	939	6.45
" Local .....	6,947	47.76
" Violence .....	712	4.89
" Unclassified or not stated.....	705	4.83
	<hr/> 14,546	<hr/> 100.00

The following table gives the percentage by classes for 18 years, 1878-1895:

Years.	Zymotic.	Parasitic.	Dietetic.	Constitutional.	Developmental.	Local.	Violence.
1878	22.61	----	.37	20.39	10.72	31.83	4.50
1879	18.72	----	.41	19.49	11.52	37.34	4.34
1880	22.82	.06	.45	19.12	10.36	37.85	3.95
1881	23.03	----	.57	20.27	11.79	36.03	3.53
1882	24.70	.02	.48	18.92	11.42	36.76	4.25
1883	23.69	.02	.38	18.43	11.78	35.47	4.20
1884	21.27	.02	.41	19.43	12.73	35.69	3.72
1885	19.36	.01	.41	18.40	12.34	38.71	4.11
1886	19.31	.01	.55	17.80	12.69	37.80	4.10
1887	21.40	.01	.38	17.45	7.99	40.45	4.24
1888	21.40	.09	.34	17.73	7.25	42.55	4.25
1889	20.07	.01	.45	17.72	7.98	41.44	4.63
1890	19.45	----	.54	17.38	6.56	46.22	4.09
1891	21.55	.01	.59	16.57	6.81	44.42	4.51
1892	22.74	.03	.51	15.02	6.31	45.26	4.52
1893	20.84	----	.48	15.94	5.85	46.68	4.89
1894	19.69	----	.39	16.70	6.13	46.57	5.02
1895	18.85	----	.42	16.74	6.45	47.76	4.89

A brief reference to some of the special diseases of the zymotic class may be of interest.

*Small Pox and Varioloid.*—There were 7 cases and 3 deaths during the year.

*Measles.*—This disease caused 26 deaths, against 30 in the previous year. There were fatal cases in every county in the State except Middlesex County.

In one town in Hartford County with 1 death. In two towns in New Haven County with 3 deaths. In three towns in New London County with 6 deaths. In three towns in Fairfield County with 3 deaths. In four towns in Windham County with 11 deaths. In one town in Litchfield County with 1 death, and in one town in Tolland County with 1 death.

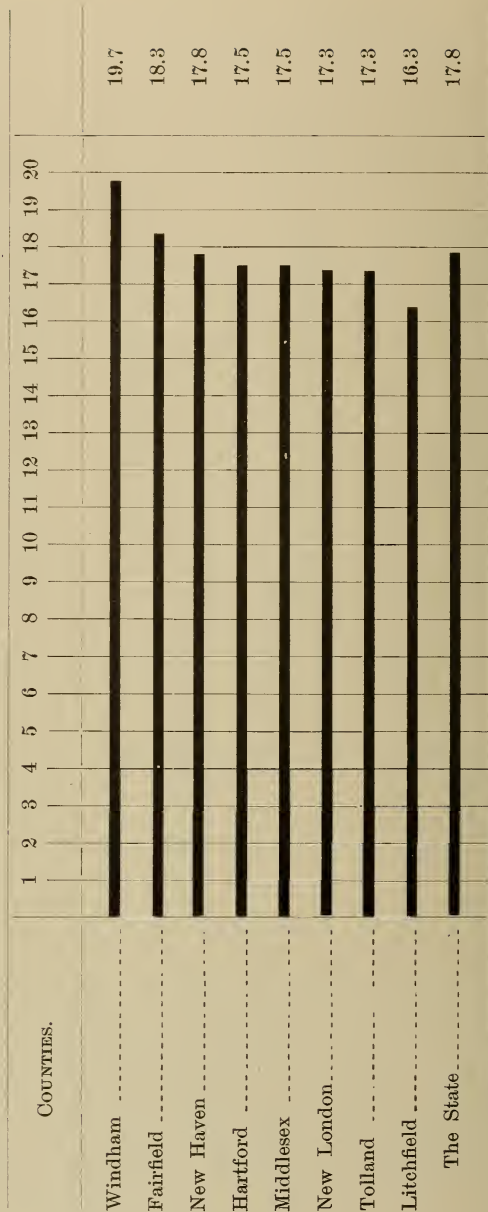
*Scarlet Fever* was fatal in 65 instances during the year, which was one more than in the year before. The disease occurred in every county in the State. The highest fatality was in Waterbury, 17; Ansonia, 15.

The fatal prevalence of scarlet fever in the counties was as follows:



# DEATH RATE, 1895.

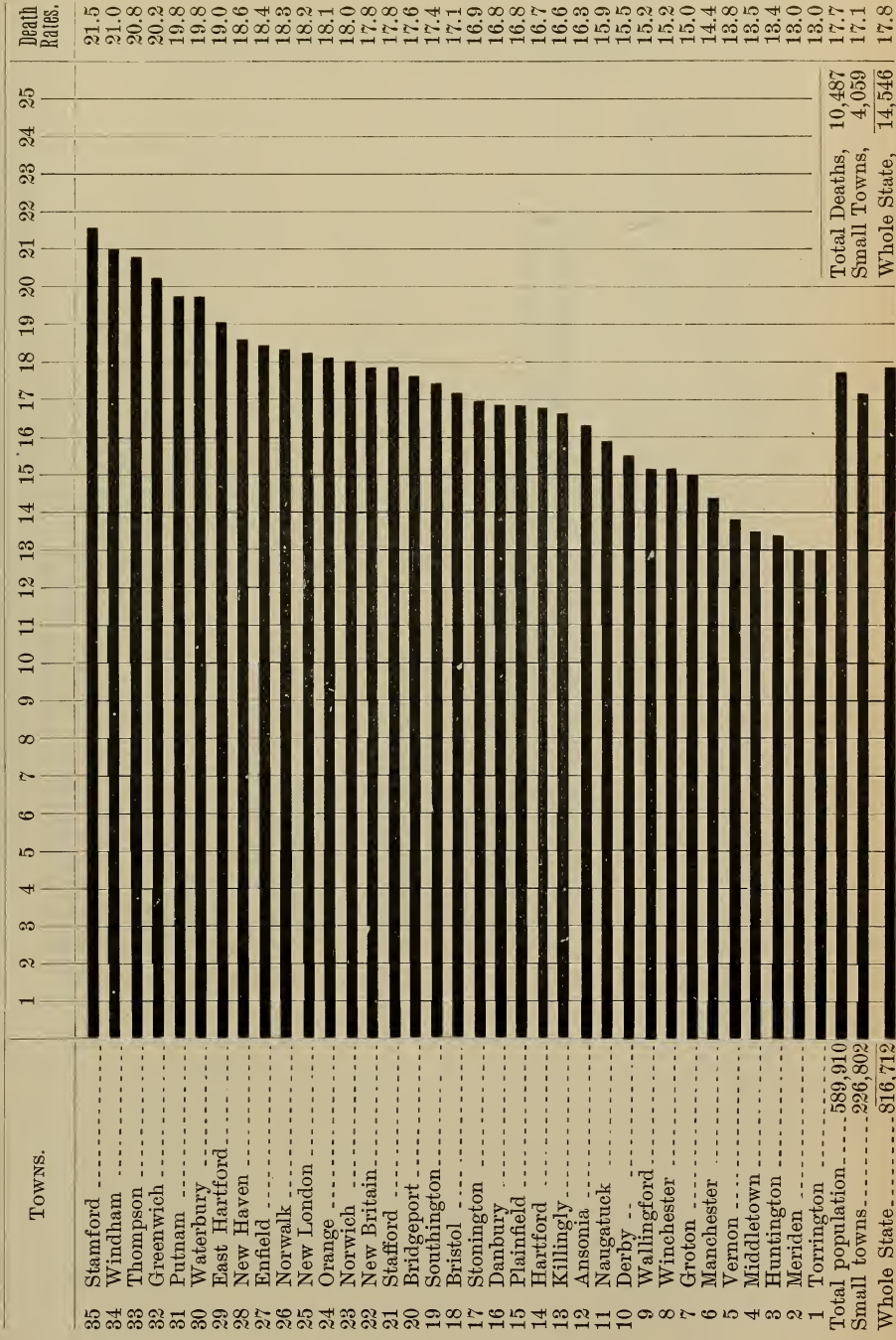
DIAGRAM C, SHOWING THE NUMBER OF DEATHS TO EACH 1000 OF THE POPULATION BY COUNTIES.





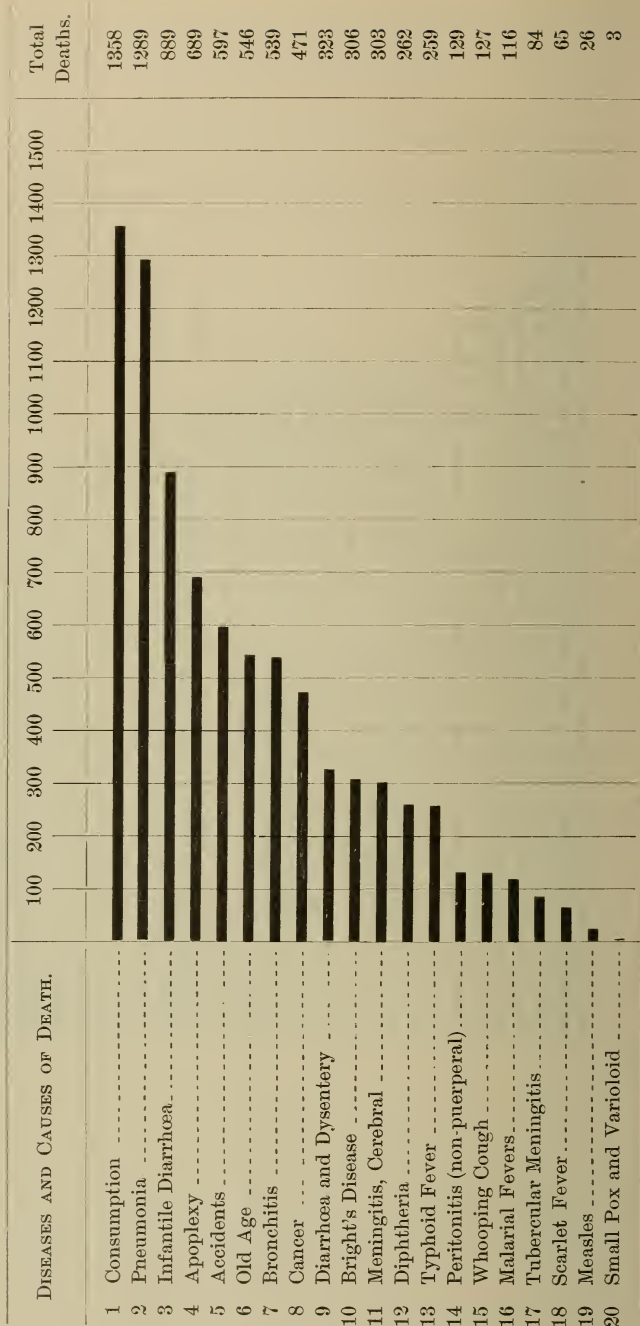
# DEATH RATE, 1895.

DIAGRAM D, SHOWING THE DEATH RATE TO EACH 1000 OF THE POPULATION, IN EVERY TOWN OF OVER 5000 INHABITANTS, AND OF THE REMAINDER OF THE STATE.



# DEATH RATE, 1895.

DIAGRAM E, EXHIBITING THE COMPARATIVE MORTALITY, BY ABSOLUTE NUMBERS, FROM TWENTY OF THE MOST PROMINENT CAUSES OF DEATH IN CONNECTICUT IN 1895.



Hartford County, 8 deaths in 6 towns.					
New Haven	"	32	"	6	"
New London	"	2	"	1	"
Fairfield	"	8	"	4	"
Windham	"	5	"	3	"
Litchfield	"	7	"	4	"
Middlesex	"	1	"	1	"
Tolland	"	2	"	1	"
		<hr/>		<hr/>	
State,		65		26	

*Diphtheria and Croup* are considered together because, if they are distinct diseases, the diagnosis cannot be made clinically in every instance.

Hence the urgent need that in every town, provision should be made for the gratuitous bacteriological examination of every suspicious case of throat inflammation.

This is not exclusively in the interest of the patient, but more in the direction of public safety.

It will prove a guide in the treatment of the patient, and especially a guide in the use of disinfectants, and in restricting the liberty of the patient.

There were attributed to these diseases 388 deaths in 1895, against 368 in 1894 and 467 in 1893.

The mortality from these diseases has occurred in counties as follows :

Hartford County, 123 deaths in 17 towns.					
New Haven	"	117	"	13	"
New London	"	20	"	6	6
Fairfield	"	83	"	13	"
Windham	"	16	"	5	"
Litchfield	"	5	"	3	"
Middlesex	"	17	"	5	"
Tolland	"	7	"	3	"
		<hr/>		<hr/>	
State,		388		65	

The death-rate from these diseases in the whole State was .47 per 1,000 of living population, as against .45 in the previous year.

*Whooping Cough* killed 127 in 1895, as against a death list of 130 in 1894.

*Typhoid Fever* was fatal in 259 instances during the year, which was 9 more than in the year before.

## DEATHS FROM TYPHOID FEVER BY COUNTIES.

FOR 41 YEARS.—1855–1895.

	Hartford County.	New Haven County.	New London County.	Fairfield County.	Windham County.	Litchfield County.	Middlesex County.	Tolland County.	Total.	Per cent. to known causes.
1855	58	62	32	15	25	28	27	20	273	5.50
1856	47	62	31	16	29	36	20	15	256	4.62
1857	61	58	28	15	27	35	29	14	267	4.55
1858	68	68	25	35	25	34	16	24	285	4.89
1859	78	55	25	48	26	36	17	22	307	5.30
1860	59	91	24	28	35	40	20	17	314	5.60
1861	92	74	32	34	42	32	23	31	360	5.25
1862	99	83	45	46	24	36	24	24	381	5.10
1863	112	96	61	39	19	45	28	27	427	5.71
1864	97	117	52	43	18	54	29	32	442	5.44
1865	129	97	80	50	60	57	42	27	548	7.79
1866	77	79	49	37	36	20	15	19	332	4.95
1867	117	105	38	38	25	46	19	28	415	6.39
1868	81	104	32	33	31	30	30	25	366	5.54
1869	84	130	35	59	38	48	38	30	458	5.63
1870	87	124	31	54	37	44	35	25	427	5.49
1871	64	111	25	53	31	34	29	5	352	4.93
1872	134	134	37	67	39	39	32	24	506	5.76
1873	114	117	37	43	33	41	24	21	430	5.00
1874	69	109	40	31	32	32	28	21	370	4.68
1875	103	119	38	45	40	44	32	28	449	3.11
1876	76	79	42	42	25	32	12	20	328	3.58
1877	80	80	33	40	25	26	17	28	329	3.32
1878	39	55	30	28	27	27	25	15	346	2.70
1879	30	24	34	26	14	15	5	11	169	1.77
1880	40	47	32	31	34	21	19	18	242	2.51
1881	52	68	23	32	30	18	19	15	257	2.45
1882	64	76	35	35	37	28	24	25	325	3.10
1883	49	118	26	29	28	18	14	20	292	2.14
1884	61	93	29	30	25	11	16	16	281	2.47
1885	66	56	22	31	18	19	8	7	227	1.09
1886	50	70	19	30	29	21	13	12	244	2.15
1887	33	51	15	37	19	14	12	14	195	1.16
1888	75	95	16	31	28	21	15	11	292	2.21
1889	62	62	26	68	20	21	6	16	281	2.25
1890	64	103	24	42	17	21	31	10	312	3.28
1891	76	77	23	49	26	15	24	11	301	2.09
1892	93	85	35	45	14	10	18	9	309	2.03
1893	72	76	21	42	17	24	16	7	275	1.84
1894	83	66	23	21	18	18	13	8	250	1.82
1895	61	72	8	75	13	20	6	4	259	1.78

## MORTALITY FROM PROMINENT ZYMOTIC DISEASES—10 YEARS.

Years.	DISEASES.								
	Small Pox & Varioloid.	Measles.	Scarlet Fever.	Typhoid Fever.	Whooping Cough.	Diphtheria.	Membranous Croup.	Infantile Diarrhoea.	Dysentery.
1886	-----	9	117	244	106	359	203	590	176
1887	4	95	117	195	70	317	171	900	286
1888	4	41	140	292	76	370	186	953	168
1889	-----	62	81	281	92	584	133	763	146
1890	12	18	67	312	137	435	122	879	98
1891	1	115	149	301	79	410	156	967	101
1892	4	49	280	309	64	369	173	968	105
1893	3	69	217	275	122	264	203	972	119
1894	16	30	64	250	130	206	162	943	185
1895	3	26	65	259	127	262	126	889	177
Av'ge.	4.	51.	129.	271.	100.	357.	163.	882.	156.
									2117.

The deaths from the above nine principal zymotic diseases registered in 1895 form 13.2 per cent. of the deaths from all causes, and are equal to 23.6 deaths in every 10,000 of the population.

## CLASS II.—PARASITIC DISEASES.

Although the diseases of this class are seldom fatal, they are by no means insignificant and often are the occasion of much suffering. Only 3 fatal events were attributed to them during the year.

## CLASS III.—DIETETIC DISEASES.

There were 62 deaths registered in this class, all but 8 of which were certified to be due to the excessive use of alcoholic stimulants.

## CLASS IV.—CONSTITUTIONAL DISEASES.

The deaths registered in this class as resulting from diseases termed constitutional numbered 2,435, that is 16.7 per cent. of the deaths from all causes, and 147 more than were reported in this class last year.

Consumption and the other tubercular diseases constituted 1,710 of the whole class.

In the light of recent discoveries, tubercular diseases are truly infectious and would be more properly included among the



zymotic class, but are for the present retained in Class IV, in accordance with long usage.

#### CLASS V.—DEVELOPMENTAL DISEASES.

In this class were registered 939.

Of these 546 were ascribed to old age, 285 to permature birth, 25 to cyanosis, 27 to congenital malformations, and 56 to other causes.

Still-births are not included in this class but are enumerated separately. See Table XXII.

Still-births are not enumerated as deaths in any part of this report.

#### CLASS VI.—LOCAL DISEASES.

The deaths of this class always exceed those of any other.

The registered number in 1895 was 6,947, or 47.7 per cent. of the total mortality of the year. This class of diseases is subdivided into orders, according to the different portions of the body in which the diseases are located.

*Diseases of the Nervous System* were registered as fatal in 1,991 instances, of which 689 were by apoplexy; 303 by inflammation of the brain or its membranes; 327 by "convulsions," a term of very indefinite meaning; 71 by softening of the brain; 56 by insanity; and 545 by various other disorders of the nervous system.

*Diseases of Circulatory System* caused 1,221 deaths, of which 1,016 were recorded as from various diseases of the heart, which is a little more than 6.6 per cent. of the total mortality in the State.

*Diseases of Respiratory System* were the cause of death in 2,064 cases. Of these 1,289 were credited to pneumonia, 539 to bronchitis, and 44 to pleurisy.

*Diseases of Digestive System.*—This group contributed 782 to the total mortality of the year. They included 103 from enteritis, 129 from non-puerperal peritonitis, 31 from appendicitis, 155 from various diseases of the liver, 156 from diseases of stomach, etc.

*Diseases of the Urinary System* occasioned 696 deaths, of which Bright's disease and nephritis are against 537, and 58 were ascribed to uræmia.

The remaining deaths from "Local Diseases" comprise 8 deaths from diseases of the eye, ear and nose, *Organs of Special Sense*;

13 of the *Lymphatic System*; of the *Reproductive System*, 45; of diseases and accidents incident to *Parturition*, 101; of the *Locomotor System*, 10; and of the *Integumentary System*, 16.

## MORTALITY FROM PRINCIPAL LOCAL DISEASES—10 YEARS.

Years.	DISEASES.									
	Apoplexy.	Paralysis.	Insanity.	Convulsions.	Heart Disease.	Bronchitis.	Pneumonia.	Pleurisy.	Peritonitis.	Bright's Disease, Nephritis and Other Kidney Diseases.
1886	341	378	37	284	689	197	827	16	127	344
1887	478	119	52	251	739	229	963	28	104	351
1888	468	97	73	267	827	365	1107	27	115	398
1889	498	82	47	287	764	324	915	38	122	403
1890	542	78	76	281	857	455	1430	31	120	422
1891	588	36	58	290	825	481	1442	31	136	482
1892	607	29	60	329	851	546	1493	38	163	514
1893	631	41	56	300	926	521	1465	38	128	591
1894	583	34	63	250	896	446	1118	34	153	520
1895	689	54	56	327	1016	539	1289	44	129	605
Average.	542.	94.	57.	286.	839.	410.	1204.	32.	129.	463.

## CLASS VII.—VIOLENCE.

The number of deaths caused by violence or negligence during the year, as registered, was 712, or 24 more than in the year before; which is 4.8 per cent. of the total mortality of the year.

Accident and negligence caused 597; homicide and suicide 115; injuries on railroads resulted fatally in 147 cases; 97 were accidentally drowned.

Of the suicides 14 chose drowning and 13 hanging as a means of exit from life. The remaining 80 selected various modes.

## CLASS VIII.—UNCLASSIFIED.

This class is an enumeration of deaths in which no cause is stated, or if stated it is in terms so general as to prevent proper classification. There were 705 in the list, in 22 of which no cause of death was given. The remaining 683 were described as due to "Tumors," "Debility," and like terms, which were not creditable to the physicians who rendered the certificates.

## STATEMENT OF BIRTHS FOR THE TEN YEARS ENDING DECEMBER 31, 1895.

COUNTIES.	SEX.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	Total for 10 yrs.
Hartford ...	Male .....	1,623	1,646	1,663	1,743	1,691	1,832	1,937	2,049	2,058	1,956	18,198
	Female ...	1,615	1,549	1,592	1,466	1,508	1,646	1,774	1,910	1,824	1,990	16,814
	Not stated	35	46	36	22	19	13	25	25	16	15	252
	Total....	3,273	3,241	3,291	3,231	3,218	3,491	3,736	3,984	3,898	3,901	35,264
New Haven.	Male .....	2,631	2,665	2,911	2,901	2,762	3,105	3,262	3,354	3,649	3,510	30,750
	Female ...	2,298	2,521	2,602	2,758	2,781	2,849	3,114	3,171	3,057	3,168	28,319
	Not stated	17	21	28	19	42	42	41	91	62	54	417
	Total....	4,946	5,207	5,541	5,678	5,585	5,996	6,417	6,616	6,768	6,732	59,486
New London	Male .....	785	826	840	778	811	872	908	915	923	887	8,545
	Female ...	804	790	809	749	753	792	837	884	838	838	8,094
	Not stated	15	16	6	8	3	4	4	3	----	3	62
	Total....	1,604	1,632	1,655	1,535	1,567	1,668	1,749	1,802	1,761	1,728	16,701
Fairfield ...	Male .....	1,545	1,737	1,729	1,766	1,871	1,954	2,106	2,227	2,089	2,045	19,069
	Female ...	1,456	1,497	1,564	1,610	1,794	1,902	2,076	1,973	2,016	1,882	17,770
	Not stated	39	50	43	16	27	29	36	40	61	51	392
	Total....	3,040	3,284	3,336	3,392	3,692	3,885	4,218	4,240	4,166	3,978	37,231
Windham...	Male .....	483	482	460	503	512	503	567	555	619	528	5,210
	Female ...	465	481	429	468	468	480	550	493	580	483	4,897
	Not stated	9	5	11	11	10	5	6	2	3	4	66
	Total....	957	968	900	982	990	988	1,123	1,050	1,202	1,013	10,173
Litchfield...	Male .....	517	525	467	534	545	537	558	566	580	581	5,410
	Female ...	418	465	442	462	474	536	520	542	604	584	5,047
	Not stated	4	8	5	7	7	10	7	2	3	6	59
	Total....	939	998	914	1,003	1,026	1,083	1,085	1,110	1,187	1,171	10,516
Middlesex ..	Male .....	365	385	378	400	404	446	446	455	439	452	4,170
	Female ...	339	358	351	396	393	451	399	451	397	427	3,962
	Not stated	3	4	3	4	----	2	2	2	3	----	23
	Total....	707	747	732	800	797	899	847	908	839	879	8,155
Tolland .....	Male .....	252	260	264	294	281	307	324	311	270	288	2,847
	Female ...	213	241	237	254	238	240	248	273	254	243	2,441
	Not stated	3	5	8	7	----	1	2	2	----	3	31
	Total....	468	506	509	555	519	548	575	586	524	529	5,319
Total for the State.....	Male .....	8,201	8,526	8,712	8,919	8,877	9,556	10,109	10,432	10,627	10,240	94,199
	Female ...	7,608	7,902	8,026	8,163	8,409	8,896	9,518	9,697	9,570	9,555	87,344
	Not stated	125	155	140	94	108	106	123	167	148	136	1,302
Grand Total	.....	15,934	16,583	16,878	17,176	17,394	18,558	19,750	20,296	20,345	19,931	182,845

## STATEMENT OF DEATHS FOR THE TEN YEARS ENDING DECEMBER 31, 1895.

COUNTIES.	SEX.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	Total for 10 yrs.
Hartford ...	Male .....	1,238	1,269	1,382	1,310	1,411	1,490	1,622	1,522	1,339	1,437	14,020
	Female ...	1,161	1,125	1,312	1,245	1,335	1,445	1,482	1,524	1,221	1,390	13,240
	Not stated	10	1	2	2	---	1	1	1	---	---	18
	Total....	2,409	2,395	2,696	2,557	2,746	2,936	3,105	3,047	2,560	2,827	27,278
New Haven.	Male .....	1,742	1,850	1,869	1,769	2,053	2,107	2,190	2,271	2,100	2,199	20,150
	Female ...	1,587	1,728	1,607	1,607	1,894	1,943	2,009	2,170	1,917	2,032	18,599
	Not stated	2	4	3	7	1	---	2	---	---	1	20
	Total....	3,331	3,582	3,584	3,383	3,948	4,050	4,201	4,441	4,017	4,232	39,769
New London	Male .....	623	670	638	644	753	713	755	721	717	720	6,954
	Female ...	653	652	665	609	691	684	725	720	698	665	6,762
	Not stated	3	13	3	2	---	---	1	1	---	1	24
	Total....	1,279	1,335	1,306	1,255	1,444	1,397	1,481	1,442	1,415	1,386	13,740
Fairfield ...	Male .....	1,155	1,211	1,364	1,354	1,356	1,566	1,642	1,607	1,472	1,543	14,270
	Female ...	1,067	1,197	1,271	1,228	1,268	1,393	1,444	1,424	1,339	1,516	13,147
	Not stated	8	4	1	1	2	3	3	7	6	10	45
	Total....	2,230	2,412	2,636	2,583	2,626	2,962	3,089	3,038	2,817	3,069	27,462
Windham ...	Male .....	350	364	353	401	409	438	433	437	432	432	4,049
	Female ...	380	403	404	439	434	408	456	425	441	482	4,272
	Not stated	5	39	4	2	---	---	1	3	---	---	54
	Total....	735	806	761	842	843	846	890	865	873	914	8,375
Litchfield ...	Male .....	330	381	446	398	426	438	501	473	490	480	4,363
	Female ...	330	384	412	371	433	450	499	396	409	462	4,146
	Not stated	---	---	1	5	3	4	1	---	---	2	16
	Total....	660	765	859	774	862	892	1,001	869	899	944	8,525
Middlesex ..	Male .....	321	356	378	348	413	430	459	378	391	373	3,847
	Female ...	331	347	394	369	391	394	453	362	342	352	3,735
	Not stated	4	1	---	4	1	---	1	1	---	---	12
	Total....	656	704	772	721	805	824	913	741	733	725	7,594
Tolland .....	Male .....	163	212	187	237	195	252	257	235	226	234	2,198
	Female ...	153	173	178	174	196	225	233	223	159	215	1,929
	Not stated	---	1	1	3	---	1	---	---	---	---	6
	Total....	316	386	366	414	391	478	490	458	385	449	4,133
Total for the State .....	Male .....	5,922	6,313	6,617	6,461	7,016	7,434	7,859	7,644	7,167	7,418	69,851
	Female ...	5,662	6,009	6,348	6,042	6,642	6,942	7,301	7,244	6,526	7,114	65,830
	Not stated	32	63	15	26	7	9	10	13	6	14	195
	Total....	11,616	12,385	12,980	12,529	13,665	14,385	15,170	14,901	13,699	14,546	135,876



METEOROLOGICAL RECORD.—PREPARED BY U. G. MYERS, OBSERVER, U. S. WEATHER BUREAU.  
 Observations taken at U. S. Weather Office, in New Haven, Conn., during 1895.

1895. MONTH.	BAROMETRIC PRESSURE.				TEMPERATURE.				HUMID- ITY.	PRECIPITATION.		WIND.		
	Monthly Mean Barometer.	Highest Barometer during month.	Lowest Barometer during month.	Range of Pressure during month.	Monthly mean Temperature.	Highest Temperature.	Lowest Temperature.	Range.		Amount of Rain and Melted Snow.	No. of days on which .01 inch Precipitation occurred.	Prevailing Direction.	Highest Velocity.	Total number of miles of movement.
January-----	29.93	30.36	29.28	1.07	26.7	48	5	43	74	5.13	15	W.	38	6,882
February-----	29.80	30.40	28.73	1.68	22.4	48	—7	55	64	.99	5	W.	47	7,474
March-----	29.86	30.40	29.19	1.20	34.4	52	17	35	64	2.36	13	N.	44	7,933
April-----	29.93	30.59	29.18	1.41	46.2	77	28	49	70	3.11	15	N.	38	6,683
May-----	29.94	30.29	29.52	.77	58.6	92	35	57	71	1.70	11	S.	31	6,244
June-----	29.96	30.35	29.66	.69	68.4	95	50	45	77	2.41	9	S. E.	27	4,638
July-----	29.84	30.12	29.64	.48	69.0	89	51	38	75	3.77	12	S.	34	4,881
August-----	29.84	30.17	29.59	.58	71.4	87	50	37	75	3.91	9	S. W.	25	5,680
September-----	29.94	30.24	29.59	.65	66.4	96	40	56	74	2.51	7	N.	33	5,946
October-----	29.91	30.46	29.33	1.13	48.6	69	26	43	69	2.32	7	N. W.	38	7,491
November-----	30.05	30.54	29.13	1.41	43.6	65	19	46	82	4.84	13	N.	43	6,409
December-----	30.13	30.80	29.48	1.32	35.4	58	7	51	71	1.91	7	N.	55	8,193
For the year-----	Mean 29.93	Highest 30.80	Lowest 28.73	Mean Range 1.03	Mean 49.3	Highest 96	Lowest —7	Mean Range 46	Mean 76	Total 34.96	Total 123	Prevailing Direction N.	Highest 55	Total 78,454



# METEOROLOGICAL OBSERVATIONS.

Taken by the U. S. Weather Bureau in New Haven, Conn., since 1873.

## REGISTRATION REPORT.

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Y. EAR.	COMPARATIVE TEMPERATURES.												COMPARATIVE PRECIPITATION.													
	Annual means.																									
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.	
1873.-	24.1	26.4	33.1	44.1	56.7	67.1	72.4	69.1	62.4	52.3	33.1	32.3	47.8	7.42	3.45	4.01	4.95	6.27	2.07	1.55	9.90	2.12	6.18	4.73	4.41	57.06
1874.-	31.3	28.0	34.1	40.0	57.2	67.6	72.3	68.1	64.9	52.5	41.2	33.2	49.2	4.29	3.86	1.34	7.89	4.92	3.41	4.90	12.99	4.07	1.68	3.44	2.85	55.82
1875.-	22.7	24.0	31.8	43.2	58.5	68.1	73.0	71.9	62.3	52.3	37.5	31.9	48.2	2.72	3.98	3.24	3.28	2.71	3.50	4.42	5.56	2.10	3.18	7.44	1.39	43.52
1876.-	33.7	30.9	35.3	47.2	58.9	72.2	77.2	72.6	61.6	50.5	43.8	24.3	50.7	1.54	4.29	10.15	7.65	3.12	1.86	11.05	1.20	5.34	1.12	4.43	2.38	54.13
1877.-	27.1	35.6	37.7	48.3	59.3	69.3	73.5	74.1	65.6	54.8	45.3	38.0	52.4	2.60	1.07	8.09	3.44	2.14	1.61	2.37	5.69	1.13	10.09	7.11	1.46	51.36
1878.-	31.3	33.5	43.4	52.4	59.0	65.8	75.1	72.1	65.4	56.9	42.5	33.8	52.9	6.80	6.40	4.18	5.08	3.75	2.62	2.53	4.93	7.67	2.33	6.33	5.50	58.12
1879.-	26.5	27.1	37.0	46.1	61.4	68.5	73.4	69.7	62.1	58.7	41.9	36.0	50.7	2.69	3.89	5.82	6.08	3.22	4.62	9.50	9.40	2.13	1.41	2.33	4.41	55.50
1880.-	37.5	35.2	36.3	49.3	64.0	70.6	73.6	70.2	64.3	51.5	39.3	27.6	51.6	3.75	3.80	5.68	3.69	1.24	1.21	4.90	8.14	3.73	4.07	2.82	3.49	46.52
1881.-	21.4	26.8	35.8	44.1	58.6	63.4	70.5	71.2	69.5	55.9	43.1	37.6	49.8	4.79	6.17	10.42	1.71	3.89	5.14	3.53	2.51	1.45	2.78	4.18	4.75	51.32
1882.-	26.8	31.6	36.9	43.5	51.4	66.2	71.6	69.7	64.5	55.3	37.8	29.0	48.7	5.91	4.52	3.59	1.55	5.05	2.74	3.03	2.6	13.43	3.54	1.31	2.99	47.92
1883.-	23.8	27.6	29.9	44.2	56.5	68.3	71.1	67.3	60.1	49.0	42.1	29.7	47.5	3.60	5.00	1.64	2.23	4.52	1.83	5.67	1.26	2.43	5.87	1.56	3.85	39.46
1884.-	23.2	31.7	33.6	44.9	55.9	66.8	67.8	69.1	66.4	53.2	40.9	31.5	48.7	4.63	5.57	4.15	2.36	3.32	5.26	5.89	5.60	1.41	2.49	2.24	6.41	49.33
1885.-	26.8	19.7	26.9	46.0	54.9	65.2	72.1	67.8	60.7	51.6	42.4	33.3	47.3	4.05	3.15	1.19	2.31	2.61	1.43	2.51	8.13	.77	5.37	3.49	3.31	38.32
1886.-	25.4	26.1	34.4	48.3	56.6	63.1	70.1	68.2	63.2	52.8	42.7	27.3	48.2	3.53	5.95	3.20	3.21	2.74	2.84	4.69	4.56	2.35	1.95	3.83	3.47	42.32
1887.-	25.2	29.8	31.3	44.4	60.5	65.5	74.5	67.8	59.7	51.1	40.4	32.6	48.6	4.24	6.22	4.22	2.75	1.85	5.62	4.66	4.80	2.21	3.24	2.85	3.09	44.08
1888.-	20.5	27.8	29.4	44.0	55.0	67.8	68.3	69.2	59.4	46.4	41.4	31.6	46.7	5.48	3.16	7.46	2.57	6.03	2.15	1.76	7.10	7.68	6.46	4.73	5.68	60.26
1889.-	34.2	25.0	38.7	48.6	59.6	67.4	70.0	68.5	63.0	48.8	44.2	38.8	50.6	4.47	2.08	1.44	4.01	3.81	3.17	17.08	4.38	4.98	3.96	7.78	2.62	59.78
1890.-	35.4	35.5	34.2	47.0	56.8	65.9	69.4	69.1	62.8	51.3	41.7	26.6	49.6	3.07	3.19	6.60	2.89	4.24	3.12	6.59	2.67	5.38	7.63	.67	2.90	48.95
1891.-	30.8	32.3	35.1	48.6	56.0	66.2	67.6	70.6	66.4	50.8	40.8	39.2	50.4	6.77	5.88	3.68	2.35	1.92	1.90	4.52	3.14	3.96	4.62	2.21	3.74	44.69
1892.-	27.1	31.2	32.8	47.0	56.1	68.9	71.6	70.6	61.7	52.4	40.2	28.4	49.0	5.39	1.56	3.07	1.31	5.11	2.36	4.33	4.99	1.54	.94	5.46	1.72	37.78
1893.-	20.2	25.9	33.7	45.2	56.8	66.4	70.9	70.6	60.1	54.2	41.0	30.8	48.0	3.47	6.23	4.50	3.84	7.08	2.07	1.89	4.86	2.24	4.75	2.56	3.22	46.71
1894.-	30.5	26.0	41.4	47.3	57.6	68.0	73.1	68.9	65.6	53.2	37.2	32.1	50.1	2.74	4.23	1.15	2.24	4.49	.49	2.40	1.70	4.63	6.11	4.23	3.33	37.74
1895.-	26.7	22.4	34.4	46.2	58.6	68.4	69.0	71.4	66.4	48.6	43.6	35.4	49.3	5.13	.99	2.36	3.11	1.70	2.41	3.77	3.91	2.51	3.32	4.84	1.91	34.96
Mean, 23 yrs.	27.5	28.7	34.7	46.1	57.6	67.2	71.7	69.9	63.4	52.3	50.0	32.2	49.4	4.31	4.12	4.40	3.50	3.65	2.96	4.95	5.12	3.71	4.06	3.94	3.43	48.06

N

#### ERRATA.

Table II, Tolland Co. Births—Mansfield should read (Am. Mother, For. Father) 4, (Am. Father, For. Mother) 3, (Both For. of different nations) 1.

Corresponding totals should read, 169, 69, 37, 14.

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State of Connecticut.

TENTH ANNUAL REPORT

OF THE

INSPECTOR OF FACTORIES

OF THE

State of Connecticut,

FOR THE

YEAR ENDING SEPTEMBER 30, 1896.



HARTFORD, CONN.:

PRESS OF THE CASE, LOCKWOOD & BRAINARD COMPANY.

1896.





# State of Connecticut.

OFFICE OF INSPECTOR OF FACTORIES,

HARTFORD, CONN., November 30, 1896.

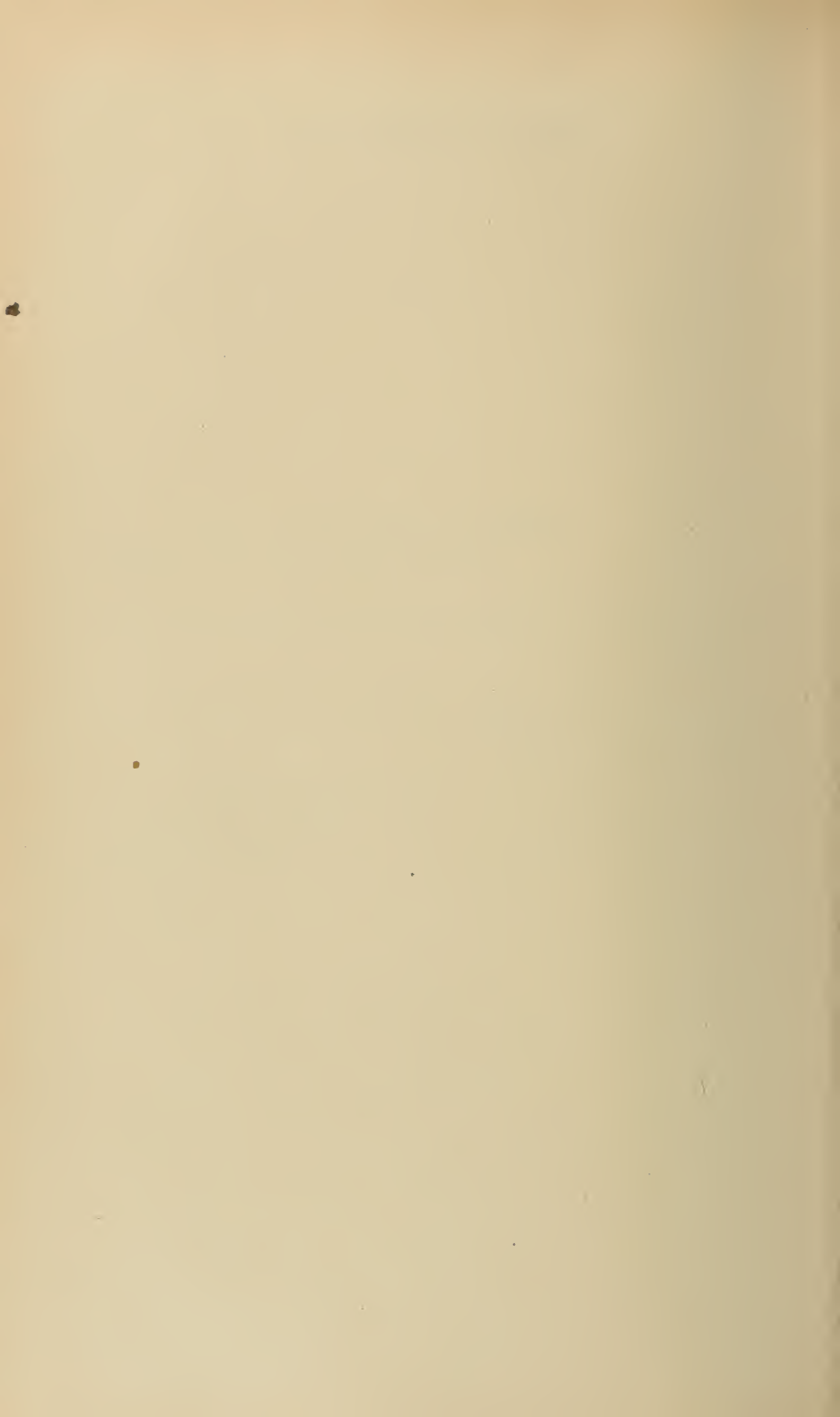
*To his Excellency O. VINCENT COFFIN, Governor of the State of Connecticut.*

I have the honor to submit herewith my report for the year ending September 30, 1896.

Very respectfully yours,

GEO. L. McLEAN,

*Inspector of Factories.*



# State of Connecticut.

## REPORT OF THE INSPECTOR OF FACTORIES.

OFFICE OF INSPECTOR OF FACTORIES,  
HARTFORD, CONN., November 30, 1896.

*To His Excellency O. VINCENT COFFIN, Governor.*

In accordance with the law under which this office is organized the Inspector of Factories herewith submits his annual report of the conditions as respects safety to life and health of the employes in the factories and workshops visited, together with a detailed statement of the inspections made and orders issued by this office during the year ending Sept. 30, 1896.

Number of factories inspected, . . . .	1,461
“ male employes, . . . .	96,225
“ female employes, . . . .	39,684
Total number of employes, . . . .	135,909
Number of factories in which no changes were ordered, .	1,002
“ “ “ “ “ .	459
“ changes ordered, . . . .	769
“ factories found with insufficient means of egress where proper authorities to enforce the law were notified, . . . .	28
Number of fatal accidents occurring in factories, during the year, as reported from various sources, . . . .	19

It is pleasing to note the extra accommodations provided by some factory owners for the comfort of their operatives.

Separate wash-rooms are provided in some cases for each sex, lockers for their clothes, clean and cheerful dining-rooms for those who bring their dinners; libraries and newspapers are, in some instances, furnished.

In several places meals are provided at cost to those who wish to purchase them, together with proper dining-room accommodations, smoking-room and libraries where the noon hour can be spent with comfort.

Such an outlay of capital for their comfort cannot be considered a business investment, but the spirit prompting it should be commended as broad and liberal, and appreciated by those enjoying such privileges.

The opposite illustration shows a section of a dining-room in one of our large metal-working factories where from six to eight hundred employes take their meals on each working day.

#### VENTILATION.

A special study of the best method for ventilating and heating of all public and factory buildings has within the last few years been given careful thought by many bright men, experiments have been made with gratifying results, reputable concerns making a specialty of heating or ventilation will guarantee to supply by mechanical means or otherwise the requisite number of cubic feet of pure air, and expel the impure from which the oxygen is exhausted.

All the Factory Inspectors in the State of Connecticut since the creation of the office in the year 1887 have worked earnestly to secure better ventilation in the many factories and workshops.

In 1893 the General Assembly passed a law relating to the ventilation of factories in which buffing, polishing, or grinding of metals, or any operation in which an excessive amount of dust is generated, requiring that such excessive dust should be removed from the atmosphere of the room or apartments used for such purposes by means of such appliances or devices as may be necessary to effectually remove the same.

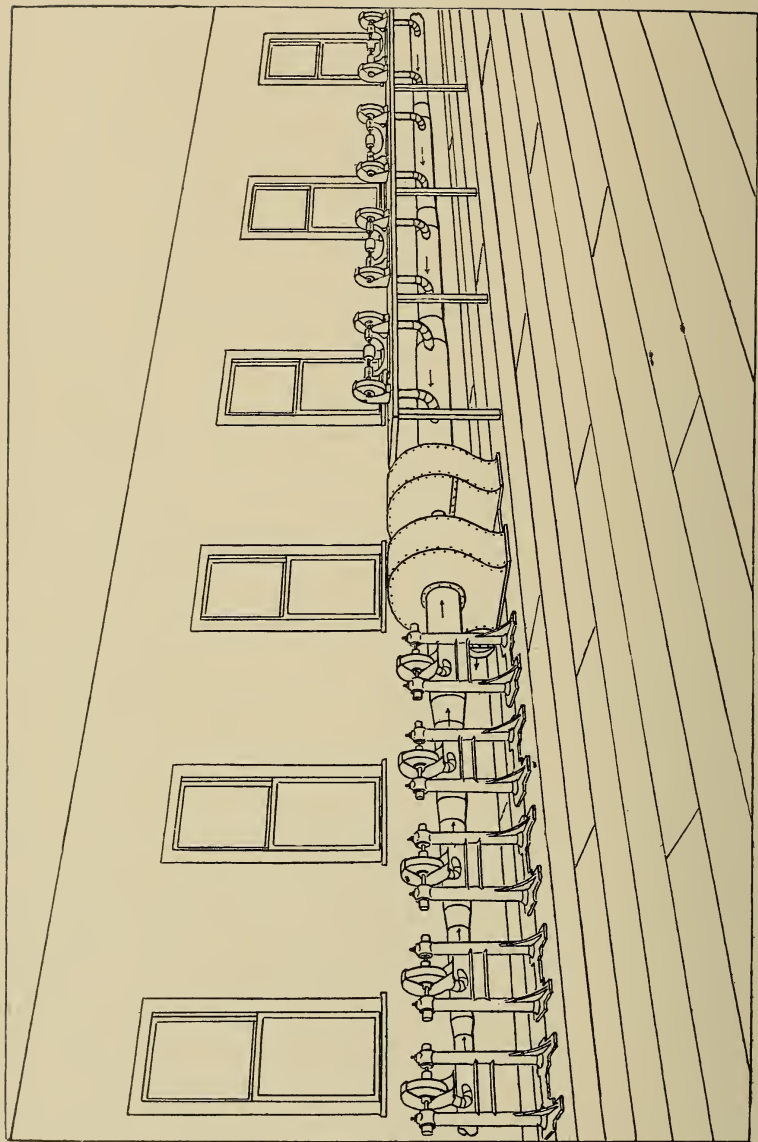
Previous to this time some of our metal-working factories were provided with good exhaust systems in their polishing or buffing rooms, but they had not come into such general use as at











EXHAUST SYSTEM,

the present time. The growth of the bicycle industry in this state has greatly increased the number of polishing and buffing rooms. In some instances blowers powerful enough to remove the dust from a few polishing or buffing lathes were provided, but as business increased connections were made with other lathes until the suction was rendered unfit to remove the dust from the rooms, and a larger or additional blower was needed.

An exhaust system which will not carry off small pieces of paper when thrown into the hoods will certainly not remove the heavy brass, steel, or other dusts, and is of no practical use. In the dip rooms of metal-working factories a marked improvement has been made in the ventilation by means of hoods, being placed over jars containing compound acids or other poisonous chemical solutions and connected through wooden pipes with exhaust fans or high chimneys with suction enough to remove the heavy gases arising from the jars.

Such gases are considered very injuries to health by competent judges. The powerful action of these compounds are plainly discernible on the hoods, whether they be of metal or wood. If these chemicals act so powerfully on metal or wood, their effect on the lungs of employes cannot help being injurious, if proper ventilation is not provided.

In the grinding of minerals, such as silex, silicate, and feldspar, a very injurious dust is made.

Until within a year or two the men employed in such establishments have had to inhale the dust which in many instances has proved injurious to health.

In three factories out of seven exhaust systems have been provided which carry off a great deal of the dust.

They are conceded by the owners themselves to be a great benefit to the health of their employes.

The opposite cut, kindly loaned by the New York Exhaust and Blow Pipe Co., shows the usual style of an exhaust system seen in the polishing and buffing rooms of our metal-working factories.

#### ELEVATORS.

Elevators that have been constructed in recent years are supplied with a mechanical device to prevent accident, in the



event of cable breaking, slacking, or the failure of the shipping cable to work.

Such devices are placed on the car, and either work on the principle that if the hoisting cable slacks or breaks, the catches will work; or, in the event of the car obtaining an increased velocity, a shoe or clutch will firmly hold the car from dropping down the shaft.

Some elevators, that were built from twenty to thirty years ago, are found on which there are no safety appliances to hold the car in case of the cable breaking or slacking, and orders have been given to provide such elevators with some safety attachment. Three accidents, caused by the falling of elevator cars, have come to the knowledge of the inspector within the last year. Two of these were caused by the elevator car being blocked underneath and the cable slacking on the drum. The persons who tried to load the cars found themselves at the bottom of the elevator shaft, well shaken up. Had there been a safety appliance on either of the cars, in working order, the accidents would not have happened. Another accident was caused by the hoisting cable breaking and the elevator car falling to the bottom of the shaft. A man waiting to put on a load was struck by the loose cable.

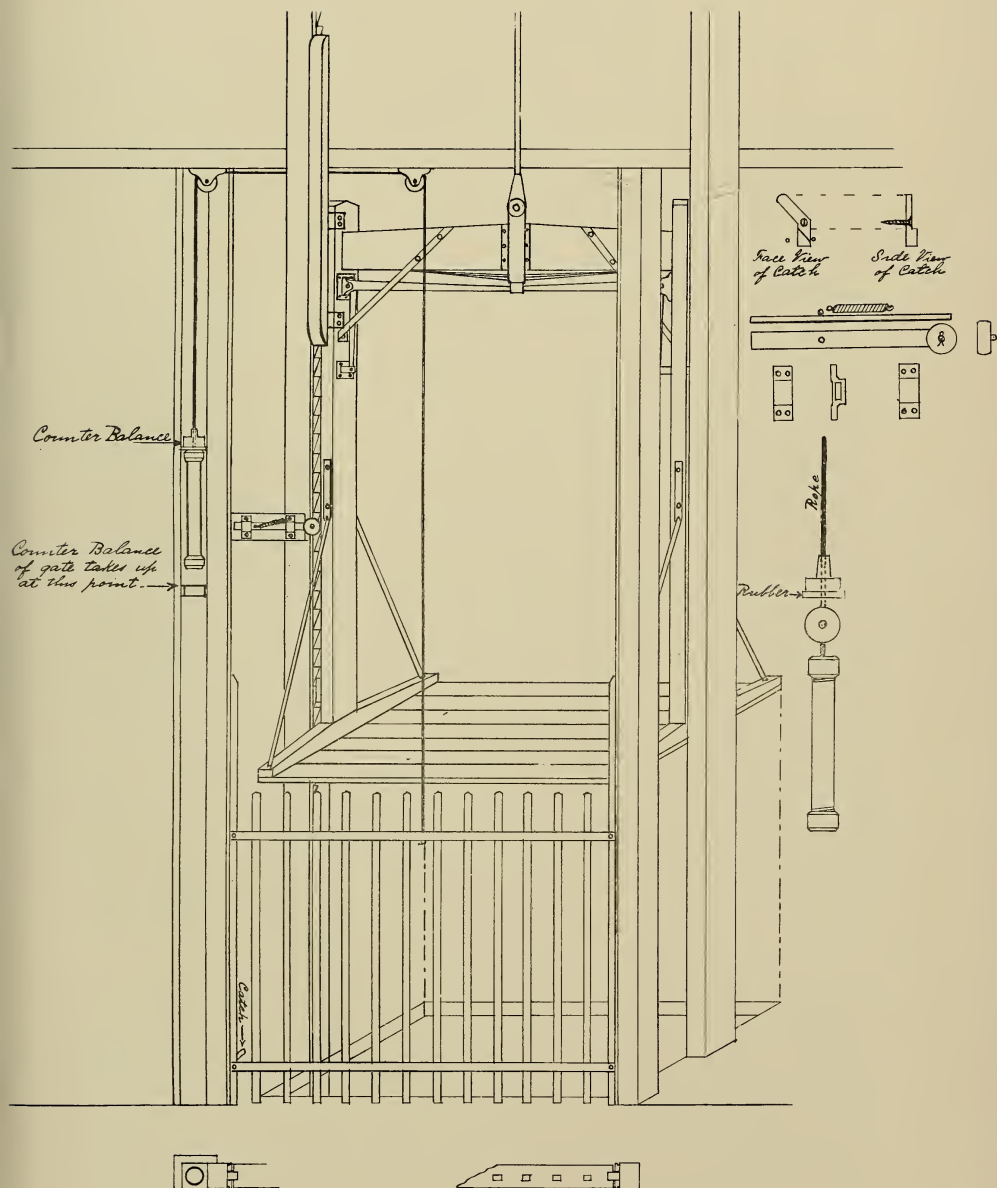
Great care is taken of the elevators in some factories. Careful men operate them. The cables are examined each week, and the safety catches kept free from rust, and tested frequently. In other places visited good appliances were found, but as no special care was taken of them, the eye bolts or cleavises had become corroded with rust, and would not drop to release springs throwing out clutches on sides, or had become pinched so that the cleavis would not drop and release springs.

The steam from dye houses and the chlorine gas in paper mills corrode iron very quickly, and safety appliances on the elevators are not apt to work in such places when tested.

#### GUARDING OF ELEVATOR OPENINGS.

The question has often been asked as to the best guards for elevator openings.

Where automatic hatches or sliding floors are used they are



Drawing of Elevator  
with Self Closing Gate.

ELEVATOR GATE.



spoken of as a good safeguard, as the openings on each floor are guarded when the elevator is away.

In some instances these hatches are used as a passageway, and in such case are considered dangerous.

One accident was reported during the last year where a boy, crossing over an automatic hatch, as the elevator car was coming up, was caught between the hatch and side post, and, but for the presence of mind of the man operating the car, would have been instantly killed.

Bars, chains, or ropes are used in some factories, but they are very apt to be found not in their proper position when they are most needed, as they do not work automatically. In other places gates are used; but where these are closed by hand, they easily become deranged, and, as a consequence, are left open some of the time.

Many manufacturers are looking for an automatic elevator gate, constructed so that it will not be continually out of working order.

The opposite cut, showing a gate which can be constructed by any mechanic, is hereby submitted:

This illustration represents details of fixtures of automatic gate with weights made of two-inch iron pipe, about 18 inches long, with a cap screwed on at each end, the pipe loaded on the inside with lead washers, with a take-up weight of iron  $3\frac{1}{2}$  inches in diameter, made as represented, with a rubber packing between the take-up weight and the weight.

#### PROPER GUARDING OF MACHINERY.

Although a great deal has been done to prevent accidents in factories, there is still room for considerable improvement. Exposed gearing has proved a source of great danger. Manufacturers when buying new machinery should insist upon the gears being guarded at exposed parts, for it is decidedly cheaper and easier to have this done at the foundries and machine shops, where they are built, than at the factories where they are used.

In countries and states where factory laws are strict, builders of machinery could not easily dispose of their machines

were not proper precautions taken to guard against accidents. In quite a number of our factories, we have more or less old machinery, but competition in different lines of manufacturing necessarily calls for new and improved machinery. In replacing old with new machinery, proper care should be taken to see that necessary safeguards are provided.

#### PROJECTING BOLTS AND SET SCREWS IN COUPLINGS AND COLLARS.

Many accidents have occurred in factories by the operatives being caught on projecting bolt heads and set screws, and they cannot be looked after too carefully.

Some manufacturers leave this to their master mechanics, and in some cases they fail to cover, or sink them flush, until some of the employes are injured, either in oiling or throwing on belts.

Projecting ends of shafting, where exposed, and liable to come in contact with the clothing of the operatives, are another source of danger, and in more than one instance have caused fatal accidents.

Pulleys running too close to each other, without any precaution to prevent belts from slipping between them, are the cause of many accidents, which, if not of so serious a nature to the operative, are decidedly so to the machinery.

Wood-working machinery, such as circular saws, jointers, and wood shapers, have been the cause of more crippled hands than almost any other machinery. Where accidents have occurred, some ingenious guards have been devised.

In the factory of the Bridgeport Sewing Machine Cabinet Co., a very serviceable guard was found in use, which was designed by one of their men, a few years ago, after an accident on a jointer or buzz planer.

There are about twenty such machines in use in this factory, and they have provided guards for each machine.

Since their adoption, no accidents have occurred.

Through the courtesy of this company, a photograph of this guard was taken, which is shown in the opposite cut.

Figure 1 represents revolving knives.



GUARD FOR JOINTER.





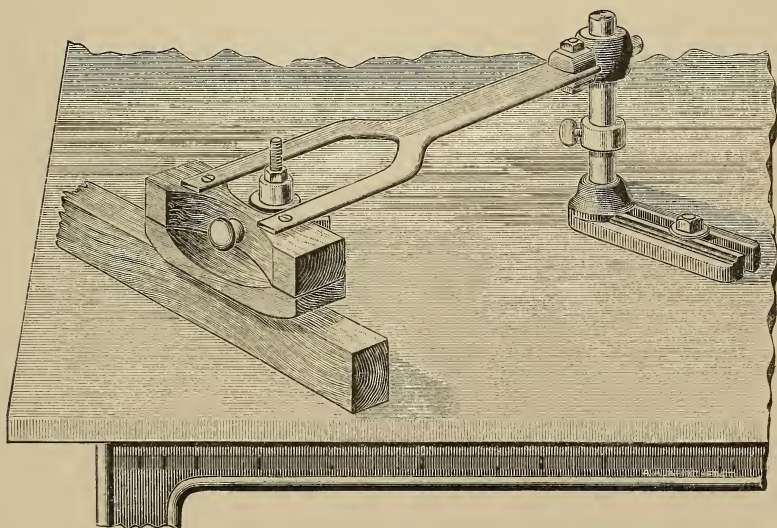
Figure 2 represents groove cut across the top of planer, dove-tailed on the underside, so as to form a place for a sliding tongue.

Figure 3 represents a piece of brass or copper, usually about 7 by 8 inches, riveted to steel tongue, and working in dovetail slot; this sheet is bent up so as to clear the revolving knives.

Wood shapers or variety moulders are called by many good workmen the most dangerous machine to be found in any wood-working shop, owing to their high speed, and the liability of the knives throwing out of machine or striking knot or other imperfection in the lumber, and injuring the fingers of the men holding it.

Any guard that will securely hold the work down to the table in proper position, and prevent one's hands from being drawn on revolving knives, and injured, should be recommended. The wood-working shops of Hartford use a guard which was designed by Mr. Gillespie, who is employed by Messrs. Strickland & Shea of this city.

The following illustration shows application of guard to machine.



WOOD SHAPERS.

## PUNCH AND DROP PRESSES

Are also the cause of many accidents. The foot and hand do not always work together, and if the operative's mind happens to be off from his work but a moment, the next instant he may be minus one or more fingers.

No feasible guard has been found which can be applied to these machines.

Friction clutches that will shut off the power in any part or section of the factory are coming into general use in the new factories which are being built, and are a source of protection to the operatives, as well as at many times a saving of power to the manufacturer; in throwing on heavy belts, the speed can be started slowly and belt run on, thereby lessening the danger of being caught by belt and thrown around shafting. In case of the breaking down of shafting or any part of machinery, the power can be cut off immediately in any section without necessitating the shutting down of the whole factory. In other factories where it is convenient, they use "idlers" to good advantage.

Some factories have electric appliances connected with the engine-room, where by touching an electric button in different sections of the factory, the machinery is stopped at once.

## MANUFACTURE AND PROPER CARE OF EXPLOSIVES.

Great care is used in the manufacture of gunpowder, fuse, and cartridges in Connecticut.

To manufacture powder it is necessary to go through a number of different operations, and, in order to save life and property, numerous buildings are used, usually of one story, lightly constructed, and placed quite a distance apart.

All buildings are isolated from any thickly-settled town or village. In the most dangerous departments all possible care is taken to prevent explosions, and the operatives are not required to be there all the time.

Although explosions occur occasionally, the loss of life or limb is comparatively small. In the manufacture of fuse, the same precautions are taken; although it does not require as many operations as powder, each process is carried on in separate buildings or apartments.



In the manufacture of cartridges, the most danger lies in the preparing of the fulminate, used for primers.

It is always prepared in an isolated building, and, in case of an explosion, hardly any one is ever injured but the man making it, and he generally fatally. One such explosion occurred during the last year. The dangers connected with such an occupation do not frighten applicants for such positions, as the wages compared with the number of hours of labor are too lucrative for many to withstand.

The manufacture of the foregoing explosives is always carried on in small and usually one-story buildings, and, in event of an explosion, do not jeopardize the lives of any but those immediately connected with its manufacture.

There are other explosives which are just as dangerous, but are not generally looked upon as such.

Acetylene gas was the cause of the death of three persons in this state within the last year.

About two years ago a man in North Carolina discovered, while experimenting with electricity, that coal dust and lime, fired together in an electric furnace, would produce a substance called Calcic Carbide, and this, when mixed with water, would slack like lime, and liberate a gas known as Acetylene Gas. Companies were formed to compress the gas in portable cylinders, to place in houses for illuminating purposes.

These cylinders were filled at an enormous pressure.

Experiments were made in a machine-shop in this state on one of the middle floors of a five-story building, where other manufacturing was carried on.

It was said that while experimenting, the machinists were at work on an invention to reduce the high pressure of the gas in cylinders by means of valves or otherwise, to that of the pressure of ordinary gas now burned in stores and houses. While so experimenting, an explosion of one cylinder took place, killing one man and setting fire to the building. Soon after a second explosion followed. Two men employed by another party were in the front of the building to secure papers and books, and were suffocated as a result of the second explosion.



The opposite illustration shows the power and effect of the explosion upon steel cylinders.

#### UNSAFE BUILDINGS.

Two factory buildings were found that were considered unsafe, as the structures were overloaded with machinery, and the foundations showed signs of weakness. In both instances the attention of the local building inspector of the places in which they were found was called to the condition of buildings, and they at once took action in the matter, and the buildings were repaired, so as to be in a safe condition. Many buildings were originally built for dwelling or mercantile purposes and were not intended when they were constructed to be built heavy enough for manufacturing purposes, but on account of their central location they have been leased for light manufacturing.

#### FIRE-ESCAPES.

The enforcing of the laws in regard to fire-escapes in factories belong either to the building inspector of each city, the warden of each borough, and the first selectman of each town, not having a building inspector, either by himself or some person appointed by him, to inspect all factories, as well as other buildings, between the first day of April and the first day of October, at least once, and to see that they are provided with sufficient means of egress. About ten months ago the attention of the factory inspector was called to the condition as regards the means of egress in case of fire of a factory building located in Danbury. Before the proper authorities could be notified a fire took place, by which, if the newspaper account is correct, the few employes then at work barely escaped with their lives; had there been a full force of help loss of life would undoubtedly have occurred.

Since this fire, whenever a factory building has been found over two stories in height and containing more than twenty persons employed, above the first story, and provided with only one means of egress, proper authorities to enforce the fire-escape act have been notified; in some instances fire-escapes have been provided, while in others nothing has been done.



ACETYLENE CYLINDERS.



## REPORTING OF ACCIDENTS.

In last year's report it was recommended the enactment of such laws by the General Assembly as will require the manufacturers of this state to report all serious accidents to their employes to the factory inspector.

Other states have such laws, and they are conceded by the inspectors of these states to be a great help to them in their work. By a careful study of the newspapers the last year, three slight accidents have occurred in which orders were given within two or three days previous to accident to the parties where the accident occurred calling their attention to certain dangers, which afterwards proved true. In almost every factory after an accident to an operative a guard is provided against its occurring again if possible. In other places where no such accident has occurred, we find dangerous places of a like character which ought to be guarded.

By keeping a record of accidents all dangers could be properly classified, and the most dangerous occupations seen at a glance, and guards if possible provided.

## ACCIDENTS AS REPORTED BY THE NEWSPAPERS.

## No. 1.

A man slightly injured by the falling of an elevator car provided with no safety device. It was caused by the car being blocked underneath, and the cable becoming slack on the drum. When a load was placed on the car the blocking gave way, when it fell to the bottom of the shaft.

## No. 2.

Man killed by the bursting of a defective steam-pipe connecting boilers with engine.

## No. 3.

Boy's leg crushed, necessitating amputation, caused by his foot slipping on the elevator, and his leg being caught between car and floor.

## No. 4.

Man slightly injured on elevator, caused by another person running a truck underneath the edge of the car as it was descending. In the excitement of the moment no one thought of stopping the elevator; the cable became slack on the drum; the truck was then pulled out from

under the car, which fell to the bottom of the shaft. No safety attachment on the elevator.

No. 5.

Man killed while throwing on belt.

No. 6.

Man's arm caught in gearing while oiling, crushing the same so badly that he died from the shock.

No. 7.

Three men killed as a result of the explosion of two acetylene gas cylinders.

No. 8.

Boy lost the sight of one eye, caused by flying lumber from a circular saw.

No. 9.

Man killed while throwing on belt.

No. 10.

Man killed by being thrown into the fly wheel of an engine which was guarded by railing. He was engaged in putting a railing around a ten-foot wooden pulley. It is supposed that a piece of gas pipe which he held in his hand was struck by the revolving wooden pulley, throwing him over railing into the arms of the fly wheel.

No. 11.

Man's leg broken by being caught by projecting set-screw in collars on shafting.

No. 12.

Man scalded by falling into a vat of dyeing solution, so that he died within a few hours.

No. 13.

Boy injured slightly by apron winding around low shafting. His life was undoubtedly saved by one of his shopmates who threw off the driving belt.

No. 14.

Man killed while throwing on belt.

No. 15.

Man lost one arm by being caught in projecting set-screw in collar on shafting.



## No. 16.

Man killed by stepping into elevator shaft, caused by his tying up the elevator gate, on account of broken counter-weight rope.

## No. 17.

Man killed by beam falling on him while at his work.

## No. 18.

Girl killed by being caught by low shafting.

## No. 19.

Man slightly injured by being caught on projecting set-screw in coupling, on shafting, and only for the driving belt slipping off from pulley would have been killed.

## No. 20.

Boy's hand crushed by being caught between floor and elevator car.

## No. 21.

One man killed by being crushed to death by heavy weights falling on him. He was employed in a foundry, where the chills had been set carelessly.

## No. 22.

Boy instantly killed while uncoiling small belt which was wound around shafting.

## No. 23.

Man's skull crushed by falling shafting while at his work.

## No. 24.

Man killed by flying lumber thrown from circular saw.

## No. 25.

Man slightly injured by broken elevator cable falling on him.

## No. 26.

Man instantly killed by being caught while throwing on belt.

## No. 27.

Boy's arm broken by his apron winding round shafting.

## No. 28.

Man lost part of his fingers on one hand on the cutters on variety moulders.

No. 29.

Man lost part of his fingers on left hand by buzz planer.

No. 30.

Man's head injured by the bursting of an emery wheel.

No. 31.

Man killed by explosion of fulminate, while preparing it for primers to be used in cartridges.

The above accounts are in all probability only a small part of the accidents that occurred during the year.

I hereby wish to thank the manufacturers of the state for their uniform courtesy and willingness in most instances to make changes desired. The past year has been one of great financial depression, and many factories have been found closed, and in some instances less than five men employed, so that no inspection has been made. Respectfully submitted,

GEORGE L. McLEAN,  
*Inspector of Factories.*

# REPORT OF INSPECTIONS.

# Inspection and Orders from September 1, 1895, to September 30, 1896.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1	Rolled Brass and Copper,	1100	(1) Box belt running through floor of attic in west extension. (2) Guard elevator opening in west extension so as to prevent cross- ing over automatic hatches. (3) Provide better ventilation in wash-room. (4) Guard by placing six inch base-board on side of balance wheel where running through floor in chain and rivet room. No orders. Guard opening in dial of automatic dial press, over ratchet.	Complied.
2	Silver Ware,	21		
3	Buckles,	350		
4	Brass and Metal Goods,	300		
5	Covering for Electric Wires,	14		
6	Fancy Cotton Goods,	450	No orders.	
7	Cotton Cloth,	280	(1) Guard by secure iron railing driving wheel of new engine. (2) Thoroughly clean and disinfect water-closet on 1st and 2d floors, in brick mill, and keep the same in good sanitary condition.	Complied.
8	Dyeing, Bleaching, and Printing,	225	Guard against elevator accident by securely fastening corner posts of elevator shafting on 2d and 3d floors of brick building.	Complied.
9	Buttons and Novelties,	355	Guard fly-wheel of engine in brass department.	Complied.
10	Brass Goods,	200	Introduce and operate by April 1, 1896, such appliances or devices as may be necessary to remove the excessive dust generated in buffing- room, either in present or contemplated new building.	In process.
11	Chemicals,	12	No orders.	
12	Special Machinery,	51	No orders.	

13	Metal Goods,	500	(1) Provide better ventilation in plating-room. (2) Guard elevator openings by keeping gates closed and chains hooked when elevator car is away from same.	Complied.
14	Clocks,	800	No orders.	
15	Brass Goods,	475	No orders.	
16	Pianos,	35	No orders.	
17	Brass Castings,	7	No orders.	
18	Sausages,	9	No orders.	
19	Artificial Ice,	26	No orders.	
20	Laundrying,	59	Guard, by secure railing, balance and fly-wheels to electric motor in basement.	
21	Rubber Goods,	36	No orders.	
22	Chemicals,	50	No orders.	
23	Plumbing,	12	No orders.	
24	Castings,	35	No orders.	
25	Marble Work,	12	No orders.	
26	Wood Work,	8	No orders.	
27	Fire Arms,	225	No orders.	
28	Brass Fixtures,	40	No orders.	
29	Corks,	43	No orders.	
30	Castings,	67	No orders.	
31	Laundrying,	13	Provide new flooring in washing room.	Complied.
32	Picture and Shade Cords,	42	No orders.	
33	Laundrying,	15	No orders.	
34	Envelope Machinery,	12	No orders.	
35	Leather and Belting,	30	No orders.	
36	Ribbons,	92	No orders.	
37	Ribbons,	65	No orders.	
38	Machinery,	50	No orders.	
39	Stoves and Furnaces,	140	No orders.	
40	Wheels,	20	No orders.	
41	Knives and Forks,	90	No orders.	
42	Carpet Paper Lining,	3	No orders.	
43	Woolen Goods,	40	No orders.	
44	Woolen Goods,	125	No orders.	
45	Woolen Goods,	45	No orders.	



## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliance.
46	Doors, Sash and Blinds,	30	No orders.	Complied.
47	Files,	30	No orders.	
48	Stone and Marble Work,	15	No orders.	
49	Woolen Goods,	20	No orders.	
50	Cotton Yarn,	175	No orders.	
51	Cotton Cloth,	115	Thoroughly clean and disinfect water-closets for males on first and second floors, and keep the same in good sanitary condition.	
52	Cotton Cloth,	50	No orders.	
53	Cotton Yarn,	35	No orders.	
54	Cotton Yarn,	40	If height between floors will not admit the working of gates at elevator openings, the openings must be guarded by bars or chains, which must be kept closed when elevator is away from same.	
55	Heavy Cotton Yarn,	23	No orders.	Complied.
56	Paper Boxes,	60	No orders.	
57	Heavy Paper,	8	No orders.	
58	Heavy Paper,	15	No orders.	
59	Heavy Paper,	10	No orders.	
60	Bed Quilts,	60	No orders.	
61	Woolen Goods,	80	(1) Guard opening in passageway over flumes by secure railing. (2) Guard, by secure railing, main belt in engine room. (3) Thoroughly clean and disinfect male water-closet on first floor, and keep same in good sanitary condition.	
62	Cotton Goods,	165	No orders.	Complied.
63	Cotton Cloth,	177	Guard overhead pulley where and as suggested.	
64	Dye Wood,	8	No orders.	
65	Hat Bodies,	25	No orders.	
66	Shoes,	225	No orders.	
67	Cigars,	55	No orders.	
68	Hatters' Goods,	8	No orders.	

69	Hat Boxes,	12	No orders.		
70	Hardware and Locks,	351	No orders.		
71	Knives,	80	No orders.		
72	Knives,	33	No orders.		
73	Brass Goods,	250	No orders.		
74	Clocks and Watches,	600	(1) Provide new cables to all elevators in movement, case, and clock factories.		
			(2) Provide some suitable mechanical device whereby the elevator cars will be securely held in event of accident to hoisting machinery or shipper ropes in movement, case, and clock factories.		
75	Knives,	18	No orders.		
76	Hats,	117	No orders.		
77	Straw Hats,	75	No orders.		
78	Starch,	17	No orders.		
79	Paper,	17	Cover or sink flush all projecting set-screws in collars on shafting.		
80	Sewing Silk,	52	No orders.		
81	Umbrellas and Mouse Traps,	80	No orders.		
82	Silk Threads,	200	No orders.		
83	Hardware,	25	No orders.		
84	Hair Pins,	12	No orders.		
85	Machinery and Tools,	5	No orders.		
86	Automatic Machinery,	15	No orders.		
87	Pins and Wire Goods,	135	No orders.		
88	Bar Iron,	50	Provide suitable and better water-closet accommodation for employees.		Complied.
89	Electric Power,	12	No orders.		
90	Woolen Goods,	40	No orders.		
91	Woolen Goods,	75	Guard elevator openings by self-closing doors, or provide bars or chains, and keep closed when elevator is away from same. Proper authority notified of insufficient means of egress.		Mill closed.
92	Heavy Paper,	18	(1) Provide guard between main belt and large engine.		
			(2) Guard, by secure railing, driving wheel, crank, and rod to engine.		
			(3) Guard, by secure hand railing, passageway over cone pulley.		Complied.
93	Machinery,	5	No orders.		
94	Woolen Goods,	40	No orders.		
95	Planing and Moulding,	15	No orders.		

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliance.
96	Cotton Goods,	260	No orders.	Complied.
97	Printing Presses and	300	No orders.	
98	Paper Machinery, Gas and Electricity,	4	No orders.	
99	Cotton Yarn and Thread,	355	Thoroughly clean water-closets, and keep the same in good sanitary condition.	Complied.
100	Repairing,	44	No orders.	
101	Silk Machinery,	200	No orders.	
102	Castings,	6	No orders.	Complied. Mill closed indefinitely.
103	Silk Velvets,	85	Guard gears on warping machine where suggested.	
104	Slax,	10	(1) Guard gears, by boxing, at six grinding machines, four in north grinding room and two in west shop. (2) Provide suitable water-closet for employes, and keep same in good sanitary condition.	
105	Spools and Printing,	30	No orders.	Complied.
106	Woolen and Worsted Goods,	72	No orders.	
107	Woolen Goods,	87	(1) Thoroughly clean entire factory, and keep the same as clean as the nature of the business will permit. (2) Provide some suitable mechanical device whereby the elevator will be securely held in event of accident to shipper rope or hoisting machinery.	
108	Rope and Twine,	6	No orders.	Complied.
109	Rope and Twine,	18	No orders.	
110	Machinery,	75	No orders.	
111	Soap,	15	No orders.	Complied.
112	Globes and Erasers,	10	No orders.	
113	Fish Guano,	18	No orders.	

114	Trunks, Belts, and	28	No orders.		
115	Straps, and Crackers,	108	(1) Cover or sink flush projecting set-screws at mixing sieves on every floor. (2) Provide some suitable mechanical device whereby the elevator cars will be securely held in event of accident to shipper ropes or hoisting machinery.	Complied.	
116	Electric Works and Ma- chinery,	30	Guard by secure railing each side of stairs over shafting in dynamo-room.	Complied.	
117	Wood Work,	13	No orders.		
118	Railroad Repairing,	30	No orders.		
119	Boilers,	10	No orders.		
120	Laundrying,	8	No orders.		
121	Hot Water Heaters,	60	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.	
122	Granite Works,	6	No orders.		
123	Machinery,	180	(1) Guard by extending guard at crank of engine to driving wheel, and thence to the wall. (2) Guard gears in tumbling-room at the end of passageway, as suggested.		
124	Silk,	508	(3) Cover or sink flush all projecting set-screws in collars on shafting. Provide some suitable mechanical device whereby the elevator will be securely held in event of accident to shipper rope or hoisting machinery.	Complied.	
125	Wood Work,	10	(1) Guard by boxing driving belt to large circular saw, on lower floor (2) Cover or sink flush all projecting set-screws in collars on shafting.	Complied.	
126	Silk,	150	No orders.		
127	Shoes,	25	No orders.		
128	Silk,	19	No orders.		
129	Paper Boxes,	70	No orders.		
130	Bed Quilts,	175	No orders.		
131	Iron Vises,	30	No orders.		
132	Machinery,	28	No orders.		
133	Granite Works,	20	No orders.		
134	Suspender Webbing,	100	Replace broken flooring by new in dye-house.	Complied.	

(Warden notified of insufficient egress.)

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliance.
135	Piano and Organ Hard- ware,	50	No orders.	
136	Metal Goods,	1,800	(1) Guard pulley at closing press in button department. (2) Put in proper working order safety catches of shipping-room elevator. (3) Guard by trough main belt running from water-wheel. (4) Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
137	Elastic Webbing,	200	No orders.	
138	Silk,	40	No orders. (Proper authority notified of insufficient egress.)	Complied.
139	Clock Cases and Boxes,	106	Provide new cable for elevator in northwest corner.	Time extended.
140	Brass Novelties,	150	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in buffing-room.	Complied.
141	Brass Novelties,	800	Guard by bars or railing elevator hatchway between finishing and manufacturing building, to prevent crossing over same.	Complied.
142	Machinery and Tacks,	23	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
143	Buckles,	50	No orders.	Complied.
144	Brass Goods,	200	(1) Cover or sink flush all projecting set-screws in collars on shafting. (2) Provide new cable for elevator. (3) Provide better ventilation in dip-room near bronzing dip.	Complied.
145	Brass Novelties,	40	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
146	Repairs and Machinery,	11	Cover or sink flush projecting set-screws in collars on shafting.	Complied.
147	Silver-Plated Flat Ware,	200	Remove precipitating vat from under plating-room to outside of building, to prevent the acid gases arising from same penetrating into said plating-room.	Complied.
148	Hardware Specialties,	25	No orders.	
149	Special Machinery and Hardware,	136	No orders.	
150	Laundring,	6	No orders.	



151	Laundrying.	10	No orders.			
152	Machine and Boiler Repairing,	25	(1) Guard large belt used for planer on second floor. (2) Cover or sink flush projecting set-screws in collars on counter shafting.		Complied.	
153	Laundrying,	10	No orders.			
154	Ship Repairing,	15	Guard by secure iron railing marine engine and gears, on the side next to boiler.		Complied.	
155	Reeds,	5	No orders.			
156	Cotton Cloth,	750	No orders.			
157	Quarrying,	80	No orders.			
158	Quarrying,	50	No orders.			
159	Fish, Oil, and Fertilizer,	0	Not running.			
160	Woolen Goods,	80	Cover or sink flush all projecting set-screws in collars on counter shafting.		Complied.	
161	Cotton Yarn,	12	Cover or sink flush all projecting set-screws in collars on shafting.		Complied.	
162	Cleaning Waste,	5	(1) Guard by boxing main belt, first floor. (2) Cover or sink flush projecting set-screws in collars on counter shafting.		Complied.	
163	Wool Scouring,	4	No orders.			
164	Wool Scouring,	8	No orders.			
165	Woolen Goods,	84	No orders.			
166	Hardware and Locks,	1,100	No orders.			
167	Shoes,	80	No orders.			
168	Lamps and Clock Cases,	39	(1) Cover or sink flush all projecting set screws in collars on shafting. (2) Provide new cable for elevator. (3) Provide better ventilation in dip-room.		Complied.	
169	Corsets,	210	No orders.			
170	Paper Boxes,	135	Cover or sink flush all projecting set-screws in collars on shafting.		Complied.	
171	Bolts and Tacks,	102	No orders.			
172	Pulp and Paper,	105	(1) Guard by boxing belt in acid room. (2) Guard driving belt to stock pump.		Complied.	
173	Pins, Hooks, and Eyes,	102	No orders.			
174	Castings,	34	No orders.			
175	Sheet Rubber,	75	No orders.			
176	Hats,	124	No orders.			

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Goods Manufactured.	Compliances.
177	Locks and Hardware,	122	No orders.	Complied.
178	Hats,	65	No orders.	
179	Hats,	70	No orders.	
180	Sash, Doors, and Blinds,	75	Provide new cable for elevator.	
181	Stoves, Furnaces, and Ranges,	50	No orders.	Complied.
182	Flour and Feed,	5	No orders.	
183	Printing,	12	No orders.	
184	Printing,	14	No orders.	
185	Printing,	25	No orders.	
186	Monuments,	2	No orders.	
187	Heavy Paper,	7	No orders.	
188	Heavy Paper,	16	Cover or sink flush all projecting set-screws in collars on shafting.	Complied. Complied.
189	Heavy Paper,	9	Cover or sink flush all projecting set-screws in collars on shafting.	
190	Shipbuilding and Repairing,	300	Guard crank and driving rod to main engine in saw-mill, by extending railing from fly-wheel around the same.	Complied.
191	Hardware,	161	No orders.	Complied.
192	Bolts and Nuts,	85	Cover or sink flush all projecting set-screws in collars on shafting.	
193	Knives and Razors,	275	No orders.	Complied.
194	Steam Specialties,	12	No orders.	
195	Printing Presses,	85	Cover or sink flush projecting set-screws in collars on shafting.	Complied.
196	Cotton Goods,	200	No orders.	
197	Metallic Bedsteads,	135	Put safety catches on elevator in old building in proper working order.	Complied.
198	Hosiery and Underwear,	130	No orders.	
199	Brass Goods,	240	Cover or sink flush projecting set-screws in collars on shafting. Put safety-catches on both elevators in proper working order. Provide new cable for elevator car in braiding room.	Complied.
200	Silver-plated Ware,	99	No orders.	

201	Forgings and Hardware,	66	No orders.	Complied.
202	Buttons,	50	No orders.	
203	Silver-plated Ware,	212	No orders.	
204	Knives,	47	No orders.	
205	Underwear,	150	Cover or sink flush projecting set-screws in collars on main and counter shafting.	
206	Pins and Brass Goods,	300	No orders.	Complied.
207	Brass Goods,	110	No orders.	
208	Mouldings,	5	No orders.	
209	Feed and Flour,	6	Cover or sink flush all projecting set-screws in collars on shafting.	
210	Rubber Goods,	85	Cover or sink flush all projecting set-screws in collars on main and counter shafting.	
211	Saddlery Hardware,	40	Guard by secure railing the front of large gears to calendar.	Complied.
212	Suspender Webbing,	114	Cover or sink flush all projecting set-screws in collars on shafting.	
213	Cotton Webbing,	175	Cover or sink flush all projecting set-screws in collars on shafting.	
214	Belting and Webbing,	230	Provide better water-closet accommodation for male employees in cotton mill.	
215	Cotton Webbing,	75	Cover or sink flush all projecting set-screws in collars on main and counter shafting.	
216	Silk Winding,	150	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
217	Soap,	9	No orders.	
218	Rubber Boots and Shoes,	165	No orders.	
219	Bicycle and Electric Supplies,	85	Cover or sink flush all projecting set-screws in collars on shafting in factories B, C, and D.	
220	Pumps,	175	Cover or sink flush all projecting set-screws in collars on shafting.	
221	Silver-plated Goods,	154	No orders.	Complied.
222	Files,	10	No orders.	
223	Printers' Supplies,	6	No orders.	
224	Bone Goods,	75	Cover or sink flush all projecting set-screws in collars on shafting.	
225	Toys and Traps,	12	No orders.	
226	Printing and Binding,	12	No orders.	Complied.
227	Printing,	12	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
228	Electric Power,	8	Thoroughly repair floor in dynamo and engine-room. Guard by iron railing driving-wheels to Fitchburg engine. Guard by boxing driving-belts where running through floor to pulleys on main shaft.	
229	Typewriters,	74	No orders.	
230	Fire Clay Materials,	20	No orders.	
231	Mosaic Tiles,	20	No orders.	
232	Wall Paper,	50	Clear away enough stock on projecting iron beam to prevent the friction on elevator cable.	Complied.
233	Thread,	32	No orders.	
234	Air Compressors,	126	Provide new cable for elevator.	Complied.
235	Paper Boxes,	63	No orders.	
236	Hats,	100	No orders.	
237	Doors, Sash, and Blinds.	25	Guard by secure railing fly-wheel to engine in engine-room. Guard by boxing large driving belt running through floor of 2d story. Guard driving belt of surfacing machine, on first floor.	Complied.
238	Sash, Door and Blinds,	25	No orders.	
239	Hats,	18	No orders.	
240	Hats,	21	No orders.	
241	Hat Bands,	40	Guard large belt in engine room, near doorway and steps.	
242	Hat Machinery,	66	No orders.	
243	Marine Hardware,	158	Cover or sink flush all projecting set-screws in collars on shafting in factory and foundry. Guard by railing or boxing gears at the end of tumbling barrels in foundry. Put safety catches on elevator car in proper working order.	Complied.

244	Padlocks and Harness Hardware,	95	Cover or sink flush all projecting set-screws in collars on shafting in padlock, harness hardware, and forge shops. Thoroughly clean water-closets for the male operatives in padlock factory, and keep the same in good sanitary condition.	Complied.
245	Carriages and Wagons,	8	No orders.	Complied.
246	Wood Work,	8	Cover or sink flush all projecting set-screws in collars on shafting.	
247	Stone Quarrying,	50	No orders.	
248	Sawing Stone,	10	No orders.	
249	Stone Quarrying,	65	No orders.	
250	Hardware and Toys,	105	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in polishing room.	Complied.
251	Hammers,	2	No orders.	
252	Cotton Webbing,	110	Cover or sink flush all projecting set-screws in collars on shafting in both buildings.	Complied.
253	Blankets,	55	Cover or sink flush all projecting set-screws in collars on shafting in all buildings.	Complied.
254	Hammock and Crino- line Linings,	150	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
255	Gun Sights,	23	No orders.	Complied.
256	Tin Ware,	30	Cover or sink flush all projecting set-screws in collars on shafting.	
257	Cotton Yarns,	48	Cover or sink flush all projecting set-screws in collars on shafting.	
258	Pistols and Hardware,	40	No orders.	
259	Bone and Ivory Goods,	45	No orders.	
260	Tin Ware,	20	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
261	Hammers,	8	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
262	Chemicals,	29	Guard by railing or casing fly-wheels of both engines.	Complied.
263	Boxes,	5	No orders.	
	Fuller's Earth and Min- erals,	23	No orders.	
264	Wood Cases,	6	No orders.	
266	Shears,	12	No orders.	
267	Carriages and Sleighs,	20	Guard ten-inch driving belt on first floor by casing three feet in height. Guard by casing driving belt to buzz-saw on second floor. Cover or sink flush all projecting set-screws in collars on shafting.	Complied.



## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
268	Butter,	28	Guard by railing front of revolving churn as suggested by special agent.	Complied.
269	Hats,	150	No orders.	
270	Hats,	240	Cover or sink flush projecting set-screws in collars on shafting in blower-room.	Complied.
271	Hats,	70	No orders.	
272	Hats,	100	No orders.	
273	Hats,	70	No orders.	
274	Heavy Paper,	43	Guard by boxing, or secure railing, cone speed gears. Guard by secure railing both stairways used as passageways over main shafting operating cone speed gears.	
			Put automatic hatch to elevator on second floor in proper working order, so as to keep closed when elevator car is away from same.	
			Cover or sink flush all projecting set-screws in collars on main and counter shafting.	Complied.
275	Hats,	185	No orders.	
276	Boxes,	95	Provide new cable for elevator in sawing-room.	Complied.
277	Hats,	150	No orders.	
278	Hat Machinery,	25	Guard by secure railing fly wheel of engine.	Complied.
279	Builders' Hardware,	375	No orders.	
280	Hats,	130	No orders.	
281	Hatters' Fur,	95	No orders.	
282	Hats,	100	Guard belts on three forming machines.	Complied.
283	Hats,	65	No orders.	
284	Hatters' Fur,	22	No orders.	
285	Hats,	80	Guard by casing or secure railing fly-wheel to engine.	Complied.
286	Corsets,	750	No orders.	
287	Electric Power,	3	No orders.	
288	Buttons and Tags,	50	No orders.	

289	Mattresses,	6	Guard belting on cotton-picker near passageway by proper casing or railing.	Complied.
290	Special Machinery,	5	No orders.	
291	Hats,	13	Guard by casing, at least three feet in height, driving belt to cutter-room on second and third floors. <del>Guard</del> Guard by casing or railing horizontal driving belt to paper-cutter. Guard by casing belt running through floor near buzz-saw to the height of three feet.	Complied.
292	Baby Carriages and Invalid Chairs,	7	No orders.	
293	Hats,	175	Guard by casing or railing belt of brushes machine. Cover or sink flush projecting set-screws in collars on shafting in stiffening-room.	
294	Hats,	90	Cover or sink flush projecting set-screws in collars on shafting in finishing-room.	Complied.
295	Hats,	54	No orders.	
296	Typewriters' Supplies,	31	Guard by proper casing or railing large belt to engine, near boiler-room door.	Complied.
297	Castings,	50	No orders.	
298	Electric Power,	12	Guard by proper railing large belt of engine No. 1.	Complied.
299	Elastic Fabrics,	65	No orders.	
300	Piano Keys,	18	No orders.	
301	Piano Key Boards,	340	Repair automatic hatches on both elevators, so that when the elevators are not in use the doors will remain closed. Cover or sink flush projecting set-screws in collars on main and counter shafting.	Complied.
302	Metal Piano Brackets,	8	No orders.	
303	Paints,	6	No orders.	
304	Novelties,	13	No orders.	
305	Wood Turning,	45	No orders.	
306	Wood Turning,	16	Cover or sink flush all projecting set-screws in collars on main and counter shafting.	
307	Auger Bits,	30	No orders.	Complied.
308	Ivory Goods,	27	No orders.	
309	Piano Key Boards,	208	No orders.	

## REPORT OF INSPECTIONS — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
310	Bright Wire Goods,	57	Cover or sink flush all projecting set-screws in collars on main and counter shafting.	Complied.
311	Organ Stops and Knobs,	10	No orders.	
312	Fancy Bone Goods,	20	No orders.	
313	Wood Turning,	4	No orders.	
314	Cotton Thread,	75	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to provide such ventilation as will remove the excessive steam generated in bleaching and dyeing-rooms.	Partially Complied.
315	Sewing Machine Silk,	14	Guard stairway by continuing railing from broad stairs to lower floor.	
316	Silk Threads,	20	No orders.	
317	Sewing Silk,	20	No orders.	
318	Sewing Silk,	15	No orders.	
319	Silk Thread,	30	Change stairway leading to lower floor, as suggested.	Complied.
320	Shoddy Extracts,	50	No orders.	
321	Sewing Silk,	17	No orders.	
322	Sewing Silk,		Not running.	
323	Paper Boxes and Box Machinery,	13	No orders.	
324	Woolen Goods,	40	No orders.	
325	Spokes and Wood Work,	7	Properly guard low pulley to band saw.	
326	Brushes,	9	No orders.	
327	Engine Governors,	50	No orders.	
328	Tin Ware,	230	Thoroughly clean water-closets and keep them in good sanitary condition.	Complied.
329	Enameled Ware,	65	Cover or sink flush all projecting set-screws in collars on main and counter shafting.	Complied
			No orders.	

330	Stone Quarrying,	150	No orders.		
331	Bright Wire Goods,	11	No orders.		
332	Stone Turning and Sawing,	75	Cover or sink flush all projecting set-screws in collars on main and counter shafting.	Complied.	
333	Stone Quarrying,	125	No orders.		
334	Metal Bells,	20	No orders.		
335	Hatters' Fur,	95	No orders.		
336	Hat Cases,	16	Guard by secure railing, fly-wheel to engine.	Complied.	
337	Wood Work,	4	No orders.		
338	Twist Drills,	40	Guard by covering or sinking flush projecting set-screws in collars on main and counter shafting.		
			Provide new cable for elevator.	Complied.	
339	Bells and Toys,	10	No orders.		
340	Shirt Waists,	225	No orders.		
341	Casting and Turning Bells,	30	Guard by secure covering or sinking flush projecting set-screws in collars on main and counter shafting.	Complied.	
342	Castings,	25	No orders.		
343	Toilet Paper,	7	Guard by boxing driving belt to paper machine.		
			Cover or sink flush projecting set screws in collars on shafting, on second floor.	Complied.	
344	Straw Hats,	140	No orders.		
345	Hatters' Fur,	54	Guard by casing, at least three feet in height, main belt in blowing and chopping room.		
346	Bells and Toys,	55	No orders.		
347	Street and Snow Sweep- ers,	20	Guard by closing passageway between iron cutter and moulding machine.	Complied.	
			Guard driving belt to sawing machine by proper casing.	Complied.	
348	Wire Novelties,	38	Cover or sink flush projecting set-screws in collars on shafting.		
349	Auger Bits,	12	No orders.		
350	Bicycle Specialties,	10	No orders.		
351	Piano Hardware,	166	Guard driving belt to small tumbling barrel near door.	Complied.	
352	Machinery,	5	No orders.		
353	Auger Gimlets,	17	No orders.		

## REPORT OF INSPECTIONS — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
354	Doors, Sash, and Blinds,	10	Guard, by secure hand railing, the right side of stairway leading to basement. Guard by boxing quarter turn belt running countershaft on 2d floor. Guard by boxing driving belt to circular saw on 2d floor. Cover or sink flush projecting set-screws in collars on shafting on 1st floor.	Complied.
355	Paper Boxes,	14	No orders.	Complied.
356	Nickel Plating,	5	No orders.	
357	Bells,	75	No orders.	
358	Auger Bits,	12	Cover or sink flush projecting set screws in collars on main and counter shafting.	
359	Bells and Toys,	26	No orders.	Complied.
360	Cotton and Silk Threads,	135	No orders.	
361	Plumbers' Supplies,	20	No orders.	
362	Rifles and Childrens' Caps,	24	No orders.	
363	Locks,	15	No orders.	
364	Casket Hardware,	24	No orders.	
365	Crackers,	42	No orders.	
366	Hall Stands,	6	No orders.	
367	Shirts,	8	No orders.	
368	Perfumery,	15	No orders.	
369	Skates,	312	No orders.	
370	Beef Storage,	20	No orders.	
371	Saluting Cannons,	11	No orders.	
372	Electrotyping,	13	No orders.	
373	Newspapers,	40	No orders.	



374	Needles,	655	Cover or sink flush projecting set-screws in collar on shafting, on 3d floor, where suggested.	Complied.
375	Paper Boxes and Paste,	40	No orders.	
376	Rubber Tires,	360	No orders.	
377	Writing Machines,	47	No orders.	
378	Steel Tubing,	200	No orders.	
379	Bicycles,	1,520	No orders.	
380	Type Setting Machines,	78	No orders.	
381	Printing Presses,	70	No orders.	
382	Bicycles,	350	No orders.	
383	Valves and Water Gates,	400	No orders.	
384	Asbestos Goods,	65	No orders.	
385	Arc and Incandescent Lamps,	120	No orders.	
386	Iron Beds and Wire Mattresses,	130	No orders.	
387	Harness and Saddlery,	140	No orders.	
388	Casket Hardware,	175	Provide better ventilation in plating room. Cover or sink flush projecting set-screws in collars on shafting. Provide hand-railing to main stairways. Proper authority notified of poor egress. Provide better ventilation in plating room. Guard, by casing, driving belt in rolling room near foundry. Prohibit persons under the age of sixteen years from having care or operating elevator.	Complied.
389	Saddlery Hardware,	200	Provide new cable for foundry elevator running to cupola. Provide better ventilation in japanning department by putting in an air shaft with side ventilation.	Complied.
390	Hardware,	200	Provide some suitable mechanical device whereby the elevator car will be securely held in event of accident to shipper rope or hoisting machinery, in bright wire department. Adjust automatic gates so that they will work freely and close when elevator car is away from same. Repair flooring near elevator opening on upper floor.	Complied.

## REPORT OF INSPECTIONS — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ploys.	Orders Given.	Compliances.
391	Cutlery,	450	No orders.	{ Factory } Burned.
392	Carpenters' Tools,	400	No orders.	
393	Castings,	50	No orders.	Complied.
394	Horseshoe Nails,	40	No orders.	
395	Corsets,	125	No orders.	Complied.
396	Electric Power,	10	No orders.	
397	Light Hardware,	80	Box main belt on third floor at least four feet in height.	{ Factory } Burned.
398	Iron Castings,	131	No orders.	
399	Hatters' Fur,	20	Cover or sink flush projecting set-screws in collars on jack shaft.	Complied.
400	Hats,	58	Guard by secure railing fly-wheel to engine.	
401	Hats,	105	No orders.	Complied.
402	Sheep's Leather,	53	Guard, by secure railing or casing, driving belt and fly-wheel to engine, in engine room.	
403	Corsets,	215	Box, to the height of four feet, driving belt to dynamo counter-shaft in finishing room.	Complied.
404	Coach Lamps and Hardware,	45	Put safety catches on elevator in proper working order and keep them so.	
405	Shoes,	50	No orders.	Complied.
406	Jewelry Cases and Boxes,	70	Put up guard rail on both sides of bridge connecting factory with engine house.	
407	Horse Collars,	14	Guard, by secure railing or casing, driving wheel and belt to engine.	Complied.
408	Paper Boxes,	14	No orders.	
409	Carriages and Wagons,	17	Guard by covering cog-wheels of straw-cutting machine.	Complied.
410	Builders' Supplies,	16	No orders.	
			Provide suitable water-closet accommodations for the employees.	

411	Malleable and Gray Castings,	76	Put in proper working order safety catches on elevator or replace by new ones.	Complied.
412	Butts and Hinges,	750	Guard elevator openings to prevent crossing over automatic hatches.	Complied.
413	Builders' Hardware,	600	Guard elevator openings to prevent crossing over automatic hatches.	Section of
			Guard fly-wheel of engine by secure railing, in building No. 7.	Factory
			Guard elevator opening in section No. 8 by bars or gates and keep them closed when elevator is away from same.	Burned.
414	Bolts and screws,	250	Guard, by casing or railing, fly-wheel of engine.	
415	Builders' Hardware,	1,450	No orders.	
416	Hosiery Goods,	300	Guard elevator openings, in picker room, by keeping chains up when elevator is away from same.	
417	Engine and Mortising Machines,	40	Cover or sink flush projecting set-screws in collars on shafting.	Complied.
			Guard projecting bolts in coupling on main shaft near hanger.	
418	Underwear,	600	Cover or sink flush projecting set-screws in collars on shafting.	Complied.
419	Malleable Iron Castings,	140	No orders.	
420	Spring Needles,	10	No orders.	
421	Chucks,	30	Cover or sink flush projecting set-screws in collars on shafting.	Complied.
422	Paper Boxes,	69	Repair gates at elevator opening on 1st floor in building No. 2, so that same will close when elevator car is away from same.	
			Repair and keep in proper working order safety-catch on elevator in building No. 2, or replace by new one.	
			Repair or replace by new, elevator-car in building No. 2.	
			Repair or replace by new one, safety-catch on elevator in building No. 1.	Complied.
423	Buttons and Metal Goods,	38	Cover or sink flush projecting set-screws in collars on shafting on 4th floor.	Complied.
424	Job and Book Printing,	15	No orders.	
425	Blank Books,	9	No orders.	
426	Electric Power,	6	No orders.	
427	Laundry Work,	39	Remove assorting-rack from the front of fire door leading from 3d floor to adjoining building.	
428	Chucks and Dies,	50	No orders.	Complied.
429	Machinery,	6	No orders.	

## REPORT OF INSPECTIONS — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliance.
430 431	Corsets, Silver-plated Ware,	830 12	No orders. Guard by secure iron railing fly-wheel to engine. Guard by boxing main belt where running through floor in engine-room.	Complied.
432 433 434 435 436 437	Hats, Hats, Hat Machinery, Machine Needles, Photographers' Supplies, Hats,	140 300 6 50 71 195	No orders. No orders. No orders. Guard by secure railing at least three feet in height, fly-wheel to engine. No orders. No orders. Guard by boxing at least four feet in height, driving-belt to pounding-machines in shaving-room. Guard by boxing main belt running through blowing-room at least four feet in height.	Complied.
438 439 440	Bar Steel and Iron, Laundry Work, Carriages,	201 38 153	No orders. No orders. Guard belt on double planer in saw-room, by boxing at least four feet high.	Complied.
441 442	Corsets, Cotton Twine,	168 20	No orders. Guard elevator opening on 3d floor by gate, bars, or chain, and keep closed when elevator is away from same. Cover or sink flush projecting set-screws in collars on main and counter shafting.	Complied.
443 444	Extracts, Office Trimmings,	12 7	No orders. No orders.	Complied.

445	Cotton Twine and Netting,	50	Cover or sink flush projecting set-screw in collar on main shaft in wheel-room. Cover or sink flush all projecting set-screws in collars on counter shafting. Cover or sink flush projecting set-screws in collars on end of shafting to netting-rooms. No orders. No orders.	Complied.
446	Cotton Twine,	16	No orders.	
447	Cotton Twine,	20	No orders.	
448	Cotton Yarns,	37	Guard by secure iron railing crank and driving-rod and the rear side of driving-wheel to engine before using the same again. Cover or sink flush projecting set-screws in collars on main and counter shafting.	Complied.
449	Cotton Twine,	16	No orders.	
450	Silver-plated Ware,	10	No orders.	
451	Sail Cloth,	19	No orders.	
452	Cotton Twine,	18	No orders.	
453	Cotton Twine,	17	Cover or sink flush projecting set screws in collars on main and counter shafting.	Complied.
454	Cotton Twine,	28	No orders.	
455	Buckles and Metal Goods,	300	Remove projecting bolts from end of coupling. Guard elevator openings by keeping chains in place. Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
456	Iron Bedsteads and Mattresses,	15	No orders.	
457	Saddlery Hardware,	23	No orders.	
458	Pocket Cutlery and Hardware,	150	No orders.	
459	Cotton Yarn,	65	Guard by secure iron railing crank, driving rod, and fly-wheel to engine. Thoroughly clean and disinfect male water-closet, and keep the same in good sanitary condition. Provide suitable plank walk leading from the mill to female water-closet.	
460	Fuse,	65	No orders.	Complied.
461	Jute Thread,	20	No orders.	



## REPORT OF INSPECTIONS — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
462 463	Lace Curtains, Cutlery and Flat Ware,	80 210	No orders. Guard elevator openings by keeping guards across openings closed when elevator is away from same. Guard by railing stairway opening in upper part of plating room. Cover or sink flush projecting set-screws in collars on shafting.	
464 465 466 467 468	Rules and Door Checks, Writing Paper, Planters' Hoes, Planters' Hoes, Bolts and Nuts,	125 75 11 33 122	No orders. Put in proper working order safety catch on machine-room elevator. No orders. No orders. Repair side timbers on two elevators so that the safety clutch will work securely. Repair springs on safety clutch of rivet-room elevator, so that the same will work securely.	Complied. Complied.
469 470 471 472 473 474	Planters' Hoes, Planters' Hoes, Cotton Batting, Hats, Hats, Hats,	22 21 17 70 110 150	No orders. No orders. Cover or sink flush projecting set-screws in collars on shafting. No orders. No orders. Guard by boxing driving belt to exhaust fan for shaving machine in shaving room.	Complied.
475 476 477 478	Iron Castings, Laundry Work, Steam Engines, Bird Cages, etc., Agricultural Imple- ments,	50 11 5 115	No orders. Guard by secure railing fly-wheel to engine in engine-room. No orders. No orders.	Complied.
479		70	Guard projecting bolts in all flange couplings where suggested. Cover or sink flush all projecting set-screws in collars on main and counter shafting.	
480	Artificial Ice,	42	No orders.	Complied.

481	Brick Machines and Elevators.	26	No orders.		
482	Auger Bits,	63	No orders.		
483	Felt,	75	No orders.		
484	Woolen Goods,	160	No orders.		
485	Hat Forming,	36	Guard driving belt of hat-forming machine No. 4.		
		15	Guard driving belt to fan of hat-forming machine No. 3.		Complied.
486	Monumental Work,				
487	Architectural Iron Work,	30	No orders.		
488	Paper Binders,	18	Guard projecting set-screw in collar on board machine.		
			Cover or sink flush projecting set-screw in collar on counter shaft in calendar-room.		
489	Manilla Paper,	26	Guard gears on calendar machine No. 3.		Complied.
490	Lt. Hardware,	10	No orders.		
491	Hack Saws,	20	Guard by casing or railing motor belt.		Complied.
492	Hardware and Tools,	5	No orders.		
493	Tools and Cutlery,	600	Repair and put in order safety catches on elevator.		
			Guard automatic elevator hatches to prevent crossing over same.		
			Guard projecting bolts in plate couplings where near hangers.		
			Cover or sink flush all projecting set-screws in collars on shafting.		Complied.
494	Cotton Warps,	250	Provide some suitable mechanical device for elevators whereby the same will be securely held in event of accident to hoisting machinery or shipper rope.		Complied.
495	Novelty Yarns,	65	No orders.		
496	Butter,	9	No orders.		
497	Wood Work,	9	Securely cover or sink flush all projecting set-screws in collars on counter-shaft for turning lathe.		
			Guard by boxing driving belt to turning lathe to a height of three feet.		Complied.
498	Hats,	50	No orders.		

## REPORT OF INSPECTIONS — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
499	Hosiery and Underwear,	475	Box belt running through floor to press machine on fourth floor in old mill. Provide hand-rail to stairway on each floor in tower and on stairways in old mill. Provide additional water closet accommodations for female employees on fourth floor in old mill. Provide additional water-closet accommodations for female employees in new mill. Cover or sink flush all projecting set-screws in collars on shafting in both mills and scouring-room. (Notified proper authority of im-proper means of egress.) No orders. Guard by secure railing crank and driving-rod of engine in braiding department. Cover or sink flush all projecting set-screws in collars on shafting. No orders. Guard by boxing or railing driving-belt to sanding machine. Cover or sink flush all projecting set-screws in collars on shafting. No orders.	Complied.
500	Paper Boxes and Cases,	14		
501	Webbing and Braiding,	250		Complied.
502	Machinery,	175		Complied.
503	Insulated Wire,	40		
504	Sash, Doors, and Blinds,	50		
505	Corset Wire,	36		Complied.
506	Brass and Bronze Hard- ware,	6		
507	Pianos and Organs,	325	Cover or sink flush all projecting set screws in collars on shafting. ( <i>Gone out of business.</i> ) Box belt running through floor to planer in milling-room. Cover or sink flush all projecting set-screws in collars on shafting. (Notified proper authority of insufficient means of egress.) No orders. No orders. (Notified proper authority of insufficient egress.) No orders. No orders. (Notified proper authority of insufficient egress.) No orders.	Complied
508	Corset Wire,	26		
509	Dress Stays,	60		
510	Electric Power,	5		
511	Pianos,	60		

512	Corsets,	65	Cover or sink flush projecting set screws in collars on shafting, first floor. (Notified proper authority of insufficient egress.	Complied.
513	Combs,	30	No orders.	
514	Writing Machines,	100	No orders.	
515	Pins and Curling Irons,	35	Cover or sink flush projecting set-screws in collars on shafting.	Complied.
516	Electricity,	5	No orders.	
517	Insulated Wire and Electrical Supplies,	85	Repair automatic hatches on second floor of one story elevator. Put in proper working order elevator gates on fourth floor in tower.	Complied.
518	Hats,	150	No orders.	
519	Clocks and Watches,	90	Cover or sink flush projecting set-screws in collars on shafting.	
520	Wood Work,	5	No orders.	
521	Brass Goods,	50	Guard by secure railing balance and driving-wheel to new engine. Box main belt running through second floor in old mill.	
			Cover or sink flush projecting set-screws in collars on shafting.	Complied.
522	Hat Cases and Band Boxes,	9	No orders.	
523	Machinery and Castings,	600	Guard main belt to engine by extending railing to side of building in machine shop near upper door.	
			Guard by secure railing balance and fly-wheel and belts to three dynamos in new roll shop.	
			Guard by secure railing crank and driving-belt to blower engine in rolling mill.	
			Securely guard head gears to turning lathes in center passageway in new rolling mill.	
			Cover or sink flush all projecting set screws in collars on shafting.	Complied.
			Guard approaches to furnace elevators.	
524	Cast and Rolled Brass,	450	No orders.	
525	Lamps and Bedsteads,	111	Cover or sink flush all projecting set-screws in collars on shafting.	
526	Brass and Copper Wire,	275	Cover or sink flush all projecting set-screws in collars on shafting.	
527	Sheet Copper,	150	Cover or sink flush all projecting set-screws in collars on shafting.	
528	Hats,	140	No orders.	
529	Cash Registers,	19	No orders.	
530	Leather Belting,	5	No orders.	
531	Printing,	70	No orders.	
532	Printing,	10	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
533 534 535 536 537	Printing, Smoked Meats, Newspapers, Newspapers, Augers and Bits,	23 11 20 40 26	No orders. No orders. No orders. No orders. Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in polishing-room.	
538 539 540 541	Gimlet Bits, Pins, Bicycle Fittings, Flush and Worsted Yarns,	10 7 60 200	No orders. No orders. No orders. Guard by boxing main belt in basement of brick mill. Guard by secure railing crank, driving-rod, and fly-wheel of Corliss engine. Adjust gates to all elevator openings so that they will be self-closing.	Complied.
542 543 544 545	Sheet Copper, Augers and Bits, Heavy Paper, Machine Tools, Brass and Copper Wire,	125 8 60 600	No orders. No orders. No orders. Guard by secure railing at least 3½ feet high fly-wheel to wire engine in rolling mill. Guard by secure railing crank and driving rod to Wheelock engines in rolling mill. Repair guard to gears on shears near old engine in rolling mill. Provide some suitable mechanical device whereby polishing and buffing-room elevator will be securely-held in event of accident to hoisting machinery or shipper rope.	
546 547	Horse Shoe Nails, Insulated Wire,	72 74	No orders. No orders.	Complied.



548	Hard Rubber Goods,	72	No orders.		
549	Bicycle Forgings,	12	No orders.		
550	Steam Pipe Fittings,	387	Guard elevator openings by keeping gates and bars down when elevator is away from same.		Complied.
			Cover or sink flush projecting set-screws in collars on shafting.		
551	Carriage Repairing,	6	No orders.		
552	Carriage Repairing,	10	No orders.		
553	Printing,	21	No orders.		
554	Light Hardware,	80	No orders.		
555	Saw and Grain Mill,	5	No orders.		
556	Carriage Repairing,	5	No orders.		
557	Woolens,	—	Not running.		
558	Builders' Hardware,	375	Guard elevator openings in second story of foundry building by doors, gates, or bar, and keep them closed when elevator is away from same.		
			Guard by railing openings in floor of engine-room.		
			Guard by secure railing fly-wheel, crank, and driving-rod to engine in drilling-room.		Complied.
559	Canned Goods,	125	No orders.		
560	Brass and Bronze Castings,	35	No orders.		
561	Carriage Hardware,	5	Guard by secure railing crank, driving-rod, and fly-wheel to engine. Securely guard gears, pulley, and belt to water-power.		Partially.
562	Iron and Brass Castings,	12	No orders.		
563	Carriage Repairing,	8	No orders.		
564	Electrical Supplies,	30	No orders.		
565	Bicycle and Corset Trimmings,	12	No orders. (Proper authority notified of insufficient egress.)		
566	Metal Goods,		Box main belt to the height of window sill in pressroom, lower floor of south mill.		
			Box main belt on second and third floor of south mill to a height of 3½ feet.		
			Adjust gates to elevator openings in north mill so that they will be self closing.		
			Thoroughly clean outside water-closets and keep same in good sanitary condition.		

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Employees.	Orders Given.	Compliances.
567	Machine Tools, Clock Trimmings, and Wheels, Spokes, and Rims, Underwear, Paper Specialties,	15	No orders.	Complicated.
568		56	No orders.	
569		9	No orders.	
570		200	No orders.	
571	Carriages, Shoes, Sewing Silk, Manilla and Paper,	77	Repair opening in floor over engine-room. Saw off projecting shaft between beater engines Nos. 2 and 3. Provide some suitable mechanical device for finishing-room elevator whereby same will be securely held in event of accident to hoisting machinery or shipper-rope.	Complicated.
572		10	No orders.	
573		75	No orders.	
574		38	No orders.	
575	Shoes, Shirts and Overalls, Trucks and Fans, Book and Colored Paper,	14	Guard stairway in old mill by proper railing. Provide proper hand-rail for stairways in old mill. Guard stairway opening on second floor by proper railing in new mill. Provide better ventilation in beater and drying-room. Provide some suitable mechanical device to stock elevator whereby the same will be securely held in event of accident to hoisting machinery or shipper.	Complicated.
576		15	Introduce and operate within three months from the date of this order some suitable appliance to remove excessive dust generated in cutter room. Provide additional water-closet accommodation for use of female employees.	
577		45	No orders.	
578		6	No orders.	
579		19	No orders.	
580		211	No orders.	

580	Butts, Pumps, and Hardware,	160	True up and reinforce side posts of elevator, or replace by new, sufficiently strong enough so that the safety catches will hold ordinary loads in event of accident to hoisting machinery or shipper.	Complied.
581	Glass Cutters and Can Openers,	5	No orders.	
582	Spoons and German Silver Ware,	150	Introduce and operate within three months from the date of this order some suitable appliance or device which will remove the excessive dust generated in trimming-room.	Complied.
583	Elastic Arm Bands,	12	No orders.	
584	Clock Dials and Sash,	12	Repair hood over dip-kettles or replace by new.	
			Guard main belt by trough with side strips in doorway between bur-nishing-room and hall.	
			Cover or sink flush projecting set-screws in collars on shafting.	
585	Trunk Hardware,	60	No orders.	
586	Steel Fish Rods,	32	No orders.	
587	Bells,	200	Put in proper working order safety catches on elevator.	Complied.
			Provide new cable for elevator.	
			(Notified proper authority of insufficient egress )	
588	Clocks,	164	Provide new cable for elevator.	Complied.
			Cover or sink flush projecting set-screws in collars on shafting.	
589	Clock Cases,	161	No orders.	
590	Gray Iron Castings,	242	No orders.	
591	Furnaces,	10	No orders.	
592	Underwear,	100	No orders.	
593	Clock Movements,	5	No orders.	
594	Brass Specialties,	6	No orders.	
595	Incubators and Brooders,	10	No orders.	
596	Hosiery,	150	Put safety catches of elevator in proper working order.	Complied.
			Provide hand-rail to stairways in new part of building.	
597	Saws,	10	No orders.	
598	Electric Power,	8	No orders.	
599	Steel Springs,	36	No orders.	
600	Spring,	28	No orders.	
601	Shears,	57	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
602	Hat Wires,	5	No orders.	Complied.
603	Hat Wires,	5	Thoroughly clean and disinfect outside water-closet and keep the same in good sanitary condition.	
604	Hats,	125	No orders.	
605	Hats,	42	No orders.	
606	Silver-Plated Ware,	65	No orders.	
607	Pies,	30	No orders.	
608	Printing and Binding,	11	No orders.	
609	Carriage and Bicycle Wood Work,	51	No orders.	
610	Carriages,	15	No orders.	
611	Extracts,	8	No orders.	
612	Printing,	15	Cover or sink flush all projecting set-screws in collars on shafting.	Partially.
613	Clocks,	500	No orders.	
614	Sheet Brass, Wire, and Tubing,	225	Repair floor near elevator opening, second floor, tubing mill. Provide new cable for elevators in tubing-room.	
615	Auger Bits and Chisels,	25	Cover or sink flush projecting set-screws in collars on shafting. Cover or sink flush all projecting set-screws in collars of main counter shafting.	
616	Lamps and Burners,	250	No orders.	
617	Brass Specialties,	14	No orders.	
618	Auger Bits and Boring Tools,	5	No orders.	
619	Shears and Scissors,	5	No orders.	
620	Bit Braces,	5	No orders.	
621	Sheet Brass and German Silver,	40	Provide suitable run for oiler of overhead shafting in rolling mill with hand-rail on one side.	Complied.

622	Wood Turning and Bicycle Grips,	18	Guard main driving belt running from engine by a trough with strips on side.	Complied.
623	Presses,	28	Cover or sink flush all projecting set-screws in collars on shafting.	
624	Bicycle Parts,	290	No orders.	
			Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in polishing and buffing-room.	Complied.
			Prohibit boy under 16 years of age from having charge of elevator.	
625	Coffin Hardware,	60	Guard fly-wheels of engines in engine-room by proper railings.	
626	General Wood Work,	7	No orders.	
627	Machine Screws,	17	No orders.	
628	Dynamos and Motors,	140	No orders.	
629	Carpets and Rugs,	1,600	Provide some suitable mechanical device whereby the elevator cars will be securely held in the event of accident to hoisting machinery or shippers on the elevator in Brussels Shop and in Worsted Mill.	
			Guard elevator openings not already protected by gates, bars, and chain, and keep them closed when elevator is away from same.	Complied.
630	Pork Packing,	175	Provide adjustable guard in front of elevator opening on west side of big elevator on third floor.	Complied.
631	Shelf Hardware,	1,600	No orders.	
632	Confectionery,	51	No orders.	
633	Salt Meats and Provisions,	19	Guard by boxing at least 4 feet high two large belts in tank room.	Complied.
634	Brass Casting,	20	No orders.	
635	Novelty Works,	6	Cover or sink flush projecting set-screws in collars on shafting.	Complied.
636	Men's Underwear,	120	No orders.	
637	Brass and Bronze Goods,	20	No orders.	
638	Sheet Brass,	20	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
639	Knit Underwear,	225	No orders.	
640	Rubber Gloves,	80	Guard fly-wheel of engine by proper railing on back side.	
641	Rubber Cloth Goods,	150	No orders.	
642	Paper Boxes,	50	No orders.	
643	Curtain and Screw Rings,	6	No orders.	



## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
644	Electricity,	8	Guard belts to dynamos as proposed and now in process of construction.	Complied.
645	Vegetable Ivory Buttons,	50	No orders.	Complied.
646	Brass and Steel Thimbles,	8	No orders.	Complied.
647	Reclaiming Rubber,	50	Guard by boxing gears on 5 washing-machines. Guard by boxing gears on one grinding machine. Guard by casing 3 feet in height, main belt on third floor.	Complied.
648	Wood Work,	12	No orders.	Complied.
649	Rubber Boots and Shoes,	1,000	Guard by railing crank and driving-rod of engine No. 1.	
650	Malleable Iron Castings,	375	No orders.	
651	Safety Pins and Umbrella Supplies,	20	No orders.	
652	Rubber Shoes,	450	Guard gears to mixing-mill side of passageway near large fly-wheel. Guard by boxing at least 3 feet in height driving belt to lining-machine in cutting-room. Guard by gates, bars, or chains, all elevator openings and keep closed when elevator is away from same.	Complied.
653	Electrical Supplies,	52	No orders.	
654	Silk and Cotton Braid,	12	No orders.	
655	Rubber Boots, Shoes, and Gloves,	850	Guard by boxing 3½ feet high, portion of fly-wheel between two Corliss engines. Repair elevators in carpenter shop, black mill, shipping-room, and in tower, so that the safety catches will operate, in event of accident to hoisting machinery or shipper-ropes. Provide automatic gates to all elevator openings and keep them in proper working order so that they will close when elevator is away from same.	In process.
656	Carriage Trimmings,	70	No orders.	

657	Screws, Stove, and Fire Bolts,	40	No orders.		
658	Brass, Fixtures and Nickel Plating,	50	Guard elevator openings on first floor by gates, bars, or chains, and keep them closed when elevator is away from same.		Complied.
659	Axles,	47	No orders.		
660	Shoes,	130	Guard elevator openings by keeping doors closed when elevator is away from same or provide bars or chains.		Complied.
661	Spokes, Rims, and Wheels,	5	No orders.		
662	Metal Buttons and Sheet Brass,	75	No orders.		
663	Hats,	150	No orders. (Notified proper authority of insufficient egress.)		
664	Carriage Forgings,	125	Guard by secure railing plank-walk over stream to water-closet. Thoroughly clean and repair outside water-closet and keep the same in good sanitary condition.		Complied.
665	Paper Bags,	45	No orders.		
666	Carriage Hardware,	20	Cover or sink flush all projecting set-screws in collars on shafting.		Complied.
667	Bolts and Nuts,	49	Thoroughly clean and disinfect outside water-closet, and keep the same in good sanitary condition.		Complied.
668	Office Hardware,	5	Box belt running through floor in second story.		Complied.
669	Metal Specialties,	5	No orders.		
670	Bolts and Nuts,	50	No orders.		
671	Carriage Hardware and Ox Shoes,	60	No orders.		
672	Tinners' Tools and Hardware,	150	Provide hand rail to stairway at west end of factory. Cover or sink flush all projecting set-screws in collars on shafting. Thoroughly clean and disinfect outside water-closet, and keep the same in good sanitary condition.		Complied.
673	Hats,	133	Guard main driving-belt and fly-wheel of engine by proper railing.		Complied.
674	Paper Boxes and Hat Cases,	12	Guard elevator openings on second and third floor by automatic hatches, gates, chains, or bars, and keep them closed when elevator is away from same.		
675	Wood Work	25	No orders.		Complied.

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
676	Brass Castings,	5	Provide ventilators in roof of brass foundry.	Complied.
677	Augers, Bits, & Braces,	43	Repair water-closet so that bowl will flush properly.	Complied.
678	Coach Lamps,	25	No orders.	Complied.
679	Hats,	200	Cover or sink flush projecting set-screws in collars on main shafting, first floor.	
680	Hats,	150	No orders.	
681	Hydraulic Air Pumps,	5	No orders.	
682	Machinery,	21	No orders.	
683	Mineral Waters,	8	No orders.	
684	Paper,	30	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
685	Pianos,	130	No orders.	
686	Sewing Machine Attach- ments,	150	No orders.	
687	Matches,	125	No orders.	
688	Pruning Shears,	6	No orders.	
689	Buckles,	66	No orders.	
690	Architectural Iron work,	40	Guard gears to large cutting-machine.	
691	Hats,	35	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
692	Carriages,	70	No orders.	
693	Wood Work,	7	No orders.	
694	Hats,	65	Guard by boxing large belt in finishing-room third floor to a height of four feet.	
695	Hardware,	20	Guard by securely covering hole in floor.	Complied.
696	Brass Work,	525	No orders.	
697	Carriage Tops,	6	No orders.	

698	Hats,	46	Place guard in front of fly-wheel on main shaft on second floor in trimming-room.	Complied.
699	Hot Water Heaters and Coils,	46	No orders.	
700	Boilers,	151	No orders.	
701	Hats,	43	Provide suitable hand rail to left side of stairway on first and second floors.	Complied.
702	Buckles,	26	No orders.	
703	Suspender Webbing,	250	No orders.	
704	Builders' Hardware,	360	Guard by boxing large belt in old plating-room to a height of four feet.	Complied.
705	Electric Power,	8	No orders.	
706	Keys,	35	No orders.	
707	Printing,	9	No orders.	
708	Hats,	100	Cover or sink flush all projecting set-screws in collars on shafting. (Notified proper authority of insufficient egress.)	Complied.
709	Dressed Beef,	5	No orders.	
710	Carriage Wheels,	7	No orders.	
711	Floor and Ceiling Plates,	7	No orders.	
712	Knit Underwear,	160	Guard by secure hand-rail stairway leading from card-room to picker-room.	
713	Furniture Hardware,	30	Guard pulley running near stairway, as suggested.	Complied.
714	Light Hardware,	16	No orders.	
715	Castors,	8	No orders.	
716	Wood Hames and Hardware,	40	Provide, within three months from the date of this order, hoods and proper exhaust pipes to all polishing lathes, and connect said pipes with exhaust fan, so as to remove the excessive dust generated in polishing-room.	
717	Screw Machine Work,	5	No orders.	Complied.
718	Plated Ware and Curling Irons,	8	No orders.	
719	Tissue Paper,	20	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
720	Colored Tissue Paper,	31	Provide hood over rag-cutter and connect by pipe with blower, to re- move the excessive dust in cutter-room.	
721	Light Weight Manilla Papers,	27	No orders.	
722	Castings,	40	No orders.	
723	Laundry Work,	13	Relay flooring in wash-room; provide proper drainage under the same to prevent water from either standing under or coming through the flooring.	Complied.
724	Brass and Wire Goods,	113	No orders.	
725	Castings,	50	No orders.	
726	Engines,	5	No orders.	
727	Electro Plating,	4	No orders.	
728	Machinery,	75	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
729	Monuments,	25	No orders.	
730	Spoons,	14	No orders.	
731	Cement Lined Iron Pipes,	18	No orders.	
732	Chains and Bicycles,	270	Introduce and operate, within three months from the date of this order, such appliances or devices as may be necessary to remove the excessive dust generated in the polishing and buffing-room.	
733	Sewing Machine At- tachments,	40	No orders.	
734	Machinery,	20	No orders.	
735	Match and Box Ma- chinery,	35	No orders.	
736	Sorting Rags,	15	No orders.	
737	Gun Fittings,	60	Guard by substantial railing fly wheel to engine.	
738	Brass Goods,	13	No orders.	Complied.
739	Printing,	8	No orders.	



740	Rubber Boots and Shoes,	1,500	No orders.	Complied.
741	Carriages,	50	Cover or sink flush all projecting set-screws in collars on shafting.	
742	Underwear,	90	Provide some suitable mechanical device for main elevator, whereby the elevator car will be securely held in event of accident to hoisting machinery or shipper rope.	
743	Worsted Yarns,	72	Repair flooring in scouring-room.	
744	Book and Folio Paper,	39	Provide new cable for elevator.	
745	Printing,	42	No orders.	
746	Lithographing,	30	No orders. (Notified proper authority of insufficient egress.)	
747	Printing and Book Binding,	225	No orders.	
748	Saddlery Hardware,	5	Put safety-catches on elevator in main building in proper working order.	Complied.
749	Electrotyping,	7	Provide hood over compound acid dip in plating-room, and connect same with pipe to chimney.	Complied.
750	Crochet Machinery,	50	No orders.	
751	Silk Thread,	76	Guard belt in engine-room by a trough.	
752	Wood Work,	12	Guard belt by boxing to a height of four feet in one-story building in the rear of office.	Complied.
753	Horse Shoe Nails,	180	No orders.	
754	Toilet Soap,	9	No orders.	
755	Paper,	11	Cover or sink flush projecting set-screws in collars on main shafting, first floor.	Complied.
756	Silox,	19	No orders.	
757	Cloth Covered Buttons,	7	Provide new cable or rope for elevator.	Complied.
758	Clocks,	18	Provide new safety-catches for elevator, and keep the same in proper working order.	
			No orders.	
			Cover or sink flush projecting set-screws in collars on shafting.	Complied.

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
759	Woolens,	111	Guard by low casing driving belts to three narrow looms in weave-room. Cover or sink flush projecting set-screws in collars on shafting. Provide some system for flushing urinal in spinning room, third floor. Repair water-closet on broad weave-room floor, and keep the same in good sanitary condition. Provide some suitable means for flushing water-closets in wet finishing room.	
760	Shoddy,	20	Guard extractor belt running through floor to extractor at least three feet high.	Complied.
761	Silk Fish Lines,	5	No orders.	Complied.
762	Wire Goods,	185	Cover or sink flush projecting set-screws in collars on shafting in big loom room, No. 1 weaving-room, and in coal sieve room on shaft over boring machine.	Complied.
763	Gas Stoves,	16	No orders.	
764	Hatters' Fur,	68	No orders.	
765	Hats,	150	Box large rubber belt in sizing-room at least four feet high. Extend guard rail of stairway to top of stairs in finishing-room, third floor of stiff shop.	Complied.
766	Machinery,	10	No orders.	
767	Hats,	200	No orders.	
768	Hat Wires,	6	No orders.	
769	Corsets,	30	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
770	Hats and Fur,	33	Guard by boxing main belt in blowing-room four feet high. Guard by secure railing or casing driving belts of engine and water-wheel in stock-room.	Complied.
771	Sweat Bands,	13	No orders.	
772	Hat Bodies,	11	No orders.	
773	Hats,	14	No orders.	Complied.

774	Wire Goods,	25	No orders.	Complied.
775	Stamped Envelopes,	250	Guard belts and pulleys to five envelope machines on third floor by boxing same as the others which are belted from overhead. Guard elevator openings on first floor by gates, bars, or chains, or deepen the elevator shaft so that the elevator cars will clear the automatic hatches, to allow the same to close when elevator is used below first floor.	
776	Illuminating Gas,	75	No orders.	
777	Chemical Dyes,	12	No orders.	
778	Cabinet Work,	21	No orders.	
779	Cabinet Work,	25	Cover or sink flush all projecting set-screws in collars on shafting on first floor.	Complied.
780	Heavy Trucks and Wagons,	25	No orders.	
781	Steam Stone Sawing,	8	No orders.	
782	Castings and Machinery.	100	Guard by boxing four feet high belt running through floor of second story, machine building. Cover or sink flush all projecting set-screws in collars on shafting. Guard door opening to hoistway in second story, machine building, by crossbars.	Complied.
783	Boxes and Cases,	7	No orders.	
784	Wood Work,	6	No orders.	
785	Mouldings,	6	Box main belt running through floor four feet high. Box driving belt to buzz saw.	Complied.
786	Ale and Porter,	9	No orders.	
787	Exhaust Pipes,	10	No orders.	
788	Cabinet Work,	25	Guard cutters to variety moulding machines.	Complied.
789	Dress Silk,	95	No orders.	
790	Engine Repairing,	14	No orders.	
791	Machinery,	20	No orders.	
792	Insulators and Corkaline Handles,	75	True up supports to elevator shaft through the entire building so that the safety-catches will hold elevator car securely in event of accident to hoisting machinery or shipper-rope.	
793	Pottery and Sewer Pipes.	8	No orders.	Complied.

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
794	Casket Hardware,	16	Box main belt running through floor at least three feet high. Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in the buffing-room.	Complied.
795	Iron Castings,	20	No orders.	
796	Brass Castings,	10	No orders.	
797	Steam Boilers and Heat- ers,	40	Guard by secure iron railing, as suggested, north and east side of fly-wheel to engine.	Complied.
798	Brass and Bronze Cast- ings,	6	No orders.	
799	Washing Powder,	5	No orders.	
800	Eyelets,	11	No orders.	
801	Special Machinery,	28	Cover or sink flush projecting set screws in collars on main shafting.	Complied.
802	Steam Boilers,	15	No orders.	
803	Horseshoes,	20	No orders.	
804	Electric Light and Power,	10	Guard by suitable railing, passageway and stairs, leading from engine and dynamo-room to boiler-house.	
805	Steam Boilers,	25	No orders.	
806	Paper Boxes,	25	No orders. (Notified proper authority for insufficient egress.)	
807	Electric Light,	20	Guard by secure iron railing, passageway to stairs leading to dynamos, as far back as fly and balance-wheels of engine.	
			Guard by secure iron railing the front and south side of balance-wheel to Ball & Wood engine located on the west side of ground floor.	
			Guard by replacing all movable boxes, covering belts, and keep the same in their proper position while machines are in motion.	
808	Engine Repairing,	6	No orders.	
809	Jobbing,	6	No orders.	

810	Drop Forging and Machine Tools,	250	Provide better ventilation in pickling-room. Repair and put in proper working order, safety catches to store-room elevator.	Complied.
811	Plumbers' Brass Goods,	5	No orders.	Complied.
812	Cotton Cloth,	300	Thoroughly clean and repair water-closets for male and female operatives in both main buildings and provide better ventilation for the same.	
813	Brass Fittings,	17	No orders.	Complied.
814	Chucks,	80	No orders.	
815	Gloves and Mittens,	43	No orders.	
816	Machinery and Tools,	1,150	Guard doors to hoistways by cross-bars on second and third floors in old factory.	
			Guard door to hoistway by cross bar on second floor in No. 2 building. Adjust and put in proper working order gates to elevator openings in No. 2 building and keep closed when elevator is away from same.	Complied.
			Guard elevator opening on third floor in grain scale building by gate, bar, or chain, and keep closed when elevator is away from same.	
			Guard by proper hooding the solid emery wheel in small tool building. (Notified proper authority of insufficient egress).	
			No orders.	
817	Lager Beer,	19	No orders.	Complied.
818	Special Machinery,	75	No orders.	
819	Machine Screws and Turned Work,	475	Cover or sink flush all projecting set-screws in collars on main shafting.	Complied.
820	Feed and Water Heaters,	30	No orders.	
821	Machine Tools,	10	No orders.	
822	Silver-plated Ware,	150	Repair and put in proper working order safety-catches on freight elevator.	
			Provide exhaust system for jobbing department of buffing room.	Complied.
823	Leather Belting,	116	No orders.	
824	Pins,	29	No orders.	
825	Sterling Silver and Plated Ware,	200	Cover or sink flush all projecting set-screws in collars on shafting. Guard by boxing driving belt, running through floor in satin finish room.	
			Repair urinal in sterling silver room so that it can be flushed properly.	Complied.



## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
826	Iron Castings,	45	No orders.	
827	Machine Jobbing,	9	No orders.	
828	Machinery,	20	Cover or sink flush projecting set-screws in collars on shafting.	Complied.
829	Fish Hooks,	13	No orders.	
830	Wood Work,	6	Repair and put in proper working order safety catches on elevator.	Complied.
831	Spring Beds,	8	No orders.	
832	Electro Plating,	8	No orders.	
833	Hardware Specialties,	6	No orders.	
834	Carriages,	30	No orders.	
835	Shears and Scissors,	102	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust arising from strapping machines.	Complied.
836	Carriages,	75	No orders.	
837	Saddlery Hardware,	160	No orders.	
838	Sash Locks,	9	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in polishing and buffing-rooms.	
839	Screw Machines,	15	No orders. (Notified proper authority of insufficient egress).	Removed from city.
840	Silk Mittens,	16	No orders.	
841	Electrical Supplies,	10	No orders.	
842	Bookbinding,	16	Thoroughly clean water-closet for men in basement and repair floor to same.	
			Prohibit all persons under sixteen years of age from having care or operating elevator.	
843	Bicycle Valves,	7	(Notified proper authority of insufficient egress.)	Complied.
844	Printing and Publishing,	20	No orders.	

845	Wood Work,	15	Guard by secure railing stairway opening on 2d floor. Guard overhead pulleys on main shaft to prevent belts from running off, as suggested.	Complied.
846	Hosiery,	15	Cover or sink flush all projecting set-screws in collars on main shaft.	
847	Leather Novelties,	15	No orders.	
848	Incandescent Lamps,	32	No orders. Guard by gate, bar, or chain, elevator opening on fifth floor, and keep closed when elevator is away from same. Provide separate water-closet accommodation for male operatives. (Notified proper authority of insufficient egress.)	Complied.
849	Printing,	15	No orders.	
850	Special Machinery,	18	No orders.	
851	Paper Boxes,	20	No orders.	
852	Paper Boxes,	19	Thoroughly clean and repair water closet for female operatives. Thoroughly clean water-closet for male operatives and provide better means for flushing the same.	
853	Job Printing,	12	No orders.	
854	Extracts,	12	No orders. (Notified proper authority of insufficient egress.)	
855	Car Trimmings,	75	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in the polishing and buffing-room. Cover or sink flush all projecting set-screws in collars on shafting. (Notified proper authority of insufficient egress.)	Partially Complied.
856	Book Binding,	10	No orders. (Notified proper authorities of insufficient egress.)	
857	Book Binding,	12	No orders. (Notified proper authority of insufficient egress.)	
858	Automatic Pay Station Apparatus,	7	No orders. (Notified proper authority of insufficient egress.)	
859	Special Machinery,	15	Replace box guarding main belt running through floor in 3d story.	Complied.
860	Printing and Book Bind ing,	33	No orders.	
861	Lithographing,	10	No orders.	
862	Shoes,	8	No orders.	
863	Overalls and Jumpers,	28	Guard shafting underneath table to sewing-machines in small room the same as the shafting to other machines.	
864	Electrical Supplies,	25	No orders.	
865	Printing,	4	No orders.	Complied.

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
866	Printing,	12	No orders.	Complied.
867	Wood Work,	8	Guard by proper guards cutters to variety machine.	
868	Printing,	5	No orders.	
869	Printing,	24	No orders. (Notified proper authority of insufficient egress.)	
870	Electrotyping and Wood			
	Engraving,	35	No orders.	
871	Laundry Work,	14	No orders.	
872	Wood Work,	6	Guard by secure railing driving-belt and fly-wheel to engine, on raised platform.	
873	Kindling Wood,	50	No orders.	
874	Wood Work,	40	No orders.	
875	Kindling Wood,	6	No orders.	
876	Drop Forgings,	6	No orders.	
877	Doors, Sash, and Blinds,	15	Replace guard around eccentric. Guard by secure railing fly-wheel to engine on the side of raised plat- form.	
878	Doors, Sash, and Blinds,	5	No orders.	Complied.
879	Special Machinery,	25	No orders. (Notified proper authority of insufficient egress.)	
880	Special Machinery,	65	Provide better ventilation for water-closet and urinal on second floor.	
881	Wood Patterns,	6	No orders.	
882	Cleaning and Dyeing,	30	No orders.	
883	Newspapers,	36	No orders.	
884	Caskets,	25	Cover or sink flush all projecting set-screws in collars on main and counter shafting.	
885	Buttons,	31	No orders.	
886	Shoes,	30	No orders.	
887	Printing,	55	No orders.	
888	Drills,	6	No orders.	
889	Ladies' Underwear,	31	No orders.	

890	Jobbing,	6	No orders.	Complied.
891	Wood Work,	6	No orders.	
892	Cigars,	7	No orders.	
893	Wood Work,	5	No orders.	
894	Carriage Hardware Trimings,	140	Repair and put in proper working order the safety catches on both elevators.	
895	Machine Jobbing,	10	No orders.	Complied.
896	Staples,	5	No orders.	
897	Joiners' Supplies,	18	No orders.	
898	Patent Medicines,	18	No orders.	
899	Carriages,	40	No orders.	
900	Coach Lamps,	9	No orders.	
901	Wood Work,	20	No orders.	
902	Wood Work,	20	No orders.	
903	Pianos,	153	Cover or sink flush all projecting set-screws in collars on shafting in basement.	
904	Ladies' Clothing and Dress Suitings,	150	Guard by boxing or casing at least three feet in height, quarter turn belt in spinning and carding room on third floor. Cover or sink flush projecting set-screws in collars on main shafting. Thoroughly clean water-closet for men in card-room. Guard projecting bolts in coupling near hanger, in similar manner as the others in the same room.	Complied.
905	Axles,	6	No orders.	
906	Card Board,	16	No orders.	
907	Card Board,	7	No orders.	
908	Woolen Goods,	105	No orders.	
909	Feldspar,	30	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated from chasers and bolters.	Complied.

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
910	Woolens,	350	Guard driving belts running second jack in south end of attic by low casing. Guard by boxing driving belts near elevator opening in attic. Cover or sink flush all projecting set-screws in collars on shafting. Thoroughly clean wooden racks on floors of water-closets. Guard all elevator openings by automatic gates or bars. Guard by casing, driving belt to roller mill. Guard by boxing pulley and belt in stairway running grindstone, on upper floor. Provide steps to lead over low shafting in elevator room. No orders.	Complied.
911	Gin,		Box main belt on third floor of grinding mill as suggested. Cover or sink flush all projecting set-screws in collars on shafting. Guard elevator openings by keeping bars in their proper position when elevator is not in use.	Complied.
912 913	Wood Work, Flour and Feed,	75 25	No orders.	Complied.
914 915 916 917	Bread, Cake, and Pies, Carriages, Boxes and Cases, Cereal and Feed Grind- ing,	5 6 12	No orders. No orders. No orders.	Complied.
918 919 920 921	Laundry Work, Wood Work, Newspapers, Wood Work,	12 15 15 25 56	No orders. No orders. No orders. No orders. Cover or sink flush projecting set-screw in collar on shaft which operates hydraulic press. Guard opening to pit for the crank and upright driving-rod of hydraulic embossing press, by casing at least eighteen inches high. Cover or sink flush all projecting set-screws in collars on shafting, on lower floor.	



922	Special Machinery,	6	No orders.		
923	Printing,	11	No orders.		
924	Special Machinery,	30	No orders.		
925	Wood Screws,	45	No orders.		
926	Special Machinery,	40	No orders.		
927	Lager Beer,	13	No orders.		
928	Car Wheels,	25	No orders.		
929	Biscuit & Crackers,	15	Guard end of gears to break-rolls next to passageway. Guard elevator openings by keeping bars in proper position when elevator car is away from same.		Complied.
930	Ladders,	10	No orders.		
931	Rubber Moulds,	10	No orders.		
932	Wood Patterns,	11	No orders.		
933	Plumbers' Specialties,	15	No orders.	(Notified proper authority of insufficient egress.)	
934	Machinery and Fire Arms,	727	No orders.		
935	Cyclometers,	125	Provide additional water-closet accommodation for female employes.		Complied.
936	Carriages,	25	No orders.		
937	Laundry Work,	24	No orders.		
938	Ticket Punches,	3	No orders.		
939	Printing,	3	No orders.		
940	Brushes,	5	No orders.		
941	Wood Work,	12	No orders.		
942	Leggins and Over Gait- ers,	70	Guard shafting underneath sewing-machine table on south side and west end of second floor. Guard shafting underneath sewing-machine table on the north side and east end of second floor.		Complied.
943	Mineral Waters,	8	No orders.		
944	Newspapers,	30	No orders.	(Notified proper authority of insufficient egress.)	
945	Newspapers,	50	No orders.		
946	Printing,	9	Provide separate and suitable water-closet accommodation for female operatives.		
947	Printing,	6	No orders.		
948	Shoes,	14	No orders.		
949	Satinet,	81	No orders.		

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ploys.	Orders Given.	Compliances.
950 951 952	Confectionery, Hardware Specialties, Soap,	90 52 75	No orders. No orders. Guard elevator openings by keeping bars in their proper place when elevator is away from same. Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
953 954 955	Electrotyping, Sterling Silverware, Cutlery,	6 16 112	No orders. No orders. Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in trimming and buffing-rooms. Provide some suitable mechanical device whereby the elevator will be securely held in event of accident to hoisting machinery or shipper- rope.	Complied.
956	Binding Board,	7	Thoroughly clean and repair outside water-closet and keep the same in good sanitary condition. Guard drying fan by one-inch mesh wire screening, or discontinue the use of said fan.	Complied.
957 958 959 960	Pulled Wool, Underwear, Underwear, Binding Board,	48 57 38 10	No orders. No orders. No orders. Guard main driving belt in basement, by platform over belt and secure railing on one side. Cover or sink flush projecting set-screws in collars on shafting, also in collars on paper machine and calendar. Guard by boxing driving belt to paper machine to a height of three feet.	Complied.
961	Cotton Yarns,	50	Repair water-closets in new mill so that they will flush properly. Thoroughly clean outside water-closet of old mill, and keep the same in good sanitary condition.	Complied.

962	Woolen Goods,	10	No orders.		
963	Binders and Album Board,		Cover or sink flush projecting set-screws in collars on shafting.	Complied.	
964	Woolen Goods,	50	Guard by railing outside doorway on second floor.	Complied.	
965	Paper Bags and Printing,	62	Cover or sink flush all projecting set-screws in collars on shafting.		
966	Carriages,	202	No orders.		
967	Silk,	80	No orders.		
968	Paper Boxes,	69	Repair socket of elevator bar so it will be secure and perfectly safe.	Complied.	
969	Carriage Trimmings,	5	No orders.		
970	Rattan Goods,	14	No orders.		
971	Stairs and Wood Work,	18	No orders.		
972	Wood Work,	10	No orders.		
973	Hardware and Tools,	35	No orders.		
974	Printing,	16	No orders.		
975	Laundry Work,	50	No orders.		
976	Wire Straightening,	26	No orders.		
977	Paper Boxes,	175	Guard by boxing main belt in printing room at least four feet in height.	Complied.	
978	Cigars,	57	Cover or sink flush all projecting set-screws in collars on shafting.		
979	Harness Hardware,	170	No orders.		
980	Machinery,	16	No orders.		
981	Specialties,	13	No orders.		
982	Advertising Novelties,	9	No orders.		
983	Electrotyping and Printing,	32	No orders.		
984	Printing,	100	No orders.		
985	Carriage Hardware,	5	No orders.		
986	Electric Power,	30	Cut-off shaft to dynamo which projects over passageway on the south side of building.	Complied.	
			Guard passageway over pumps in basement, south side of stairs, by secure hand-railing on one side.		
			Provide passageway over pumps in basement, north side of stairs, and guard the same by secure hand-rail on one side.		
			Guard by secure railing opening next to pumps on north side, extending the same from stairs to bed of engine.		

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
987	Envelopes,	210	Guard belt to two separate envelope machines, recently placed in position, by boxing the same. Provide new cable to elevator situated in the west part of building. Guard automatic hatches to elevators on third floor, so as to prevent passing over the same. Cover or sink flush projecting set-screw in collar on shaft furnishing power to annex. Thoroughly clean and disinfect outside water-closet, and keep the same in good sanitary condition.	Complied.
988	Mouldings,	17	No orders.	In Process.
989	Engine and Car Repairing,	70	Guard fly-wheel to engine, from the shaft around the west side to bed of engine, by casing three feet in height. Prohibit the oiling of overhead shafting in engine-room while the same is in motion. Thoroughly clean and disinfect water-closet and keep the same in good sanitary condition.	In Process.
990	Engine and Car Repairing,	170		
991	Engine and Car Repairing,	300	Provide suitable guards for cutters to variety moulding machine. Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
992	Worsted and Woolen Goods,	125	Provide new cable for elevator. Provide hand-rail to stairway leading from finishing-room to gig-room. No orders.	Complied.
993	Knit Goods,	85	Rox belt on one side in first weave-room in number one mill.	
994	Woolen Goods,	250	Cover or sink flush all projecting set-screws in collars on main and counter-shafting. Provide automatic gates to elevator openings.	

995	Cotton Carding,	18	No orders.	Complied.
996	Envelopes,	150	No orders.	
997	Silk Thread,	375	Provide some suitable device for elevator gates in tower, so that the same will close automatically.	
998	Illuminating Gas and Electric Power,	6	Guard by iron railing four feet high balance wheel to engine, next to passageway, as suggested.	Complied.
999	Woolen Yarn,	70	No orders.	
1000	Woolen and Worsted Goods,	360	No orders.	
1001	Woolen and Worsted Goods,	300	Cover set-screws on shafting to sizing machine on fourth floor. Guard belts and gears to east brush machine the same as those to west brush machine. Guard, as suggested, driving belts to carders by iron railing two feet high.	Complied.
1002	Woolen and Worsted Goods,	300	Box belt running through floor to filter in basement of wood mill. Cover or sink flush all projecting set-screws in collars on main and counter shafting.	
1003	Cotton and Woolen Goods,	180	Provide some suitable device to make the gates to elevator openings in east tower of main mill work automatically. Replace box over shaft to knitting machine. Cover or sink flush all projecting set screws in collars on shafting.	
1004	Cotton Warps,	50	No orders.	Partially Complied. Complied.
1005	Cut Glass,	6	No orders.	
1006	Keys,	31	No orders.	
1007	Buckles,	75	No orders.	Complied.
1008	Burr Stone,	6	No orders.	
1009	Ship Building,	6	No orders.	
1010	Wire Cloth,	12	No orders.	Complied.
1011	Carriages,	15	No orders.	
1012	Wood Novelities,	10	Guard, by secure railing, fly-wheel to engine near entrance and black-smith shop. No orders.	
1013	German Silver Castings,	7	No orders.	Complied.
1014	Paper Boxes,	325	No orders.	



## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1015	Rubber Goods, Rubber Goods, Wood Work, Bicycles,	185	No orders.	Complied.
1016		15	No orders.	
1017		30	No orders.	
1018		275	Introduce and operate, within three months from the date of this order, such appliances or devices as may be necessary to remove the excessive dust generated in the polishing-room.	
1019	Wood Work, Lager Beer, Elevators, Carriages, Carriages, and Cycle Hardware,	102	No orders.	Complied.
1020		15	No orders.	
1021		11	No orders.	
1022		40	No orders.	
1023		35	No orders.	
1024		60	Guard main belt of engine, in basement of new building, by railing at least four feet high.	Complied.
1025	Drop Forgings, Lager Beer, Woolen Goods,	10	No orders.	
1026		26	No orders.	
1027		100	Guard projecting bolts in couplings on main shaft in weave room, north end. Cover or sink flush projecting set-screws in collars on shafting.	Complied.
1028	Woolen and Worsted Goods,	170	Guard outside doorway on third floor of stone mill by crossbars. Guard, by boxing three feet in height, driving belt in weave-room near closet. Guard quarter-turn belts by boxing three feet high in spinning-room of stone mill. Provide new flush water-closets to replace present system at end of weave-room. Cover or sink flush all projecting set-screws in collars on shafting.	Complied.

1029	Woolen Goods,	108	Guard driving belt in dryer-room by casing three feet high.	Complied.
1030	Shoddies,	12	Cover or sink flush all projecting set-screws in collars on shafting.	
1031	Woolen Goods,	100	No orders.	
1032	Woolen Goods,	100	No orders.	
1033	Woolens,	35	Cover or sink flush all projecting set-screws in collars on shafting. Thoroughly clean outside water-closet for men and keep the same in good sanitary condition.	Complied.
1034	Woolen Goods,	44	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
1035	Woolen Goods,	50	No orders.	
1036	Woolens,	300	Cover or sink flush all projecting set-screws in collars on shafting. Thoroughly clean water-closets and keep the same in good sanitary condition.	Complied.
1037	Tissue Paper,	50	Case driving belt in lower weave-room of new mill.	
1038	Copying Specialties,	15	Provide new cable for elevator in old mill.	
1039	Shoes,	47	Guard elevator openings by keeping chains across, and doors closed when elevator is away from same.	In process.
1040	Grey Iron Castings,	57	No orders.	
1041	Drop Forging and Finishing,	25	Provide suitable mechanical device whereby the elevator car will be securely held in event of accident to shipper-rope or hoisting machinery.	
			No orders.	
			Connect polishing lathes on east side of polishing-room with exhaust system.	Partially Complied.
			Cover or sink flush all projecting set-screws in collars on shafting.	
			Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in polishing department.	
			Cover or sink flush all projecting set-screws in collars on shafting.	
			Repair outside platform to brick mill.	Complied.

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliance.
1042	Feed, Flour, and Grain,	20	Guard by secure railing fly-wheel to engine. Provide some suitable mechanical device whereby the elevator car will be securely held in event of accident to hoisting machinery or shipper-rope.	Complied.
1043	Powder,	126	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
1044	Shoddies,	40	No orders.	
1045	Silk Ribbons,	118	No orders.	
1046	Paper Boxes and Plush Cases,	90	No orders.	
1047	Paper Boxes and Paste,	50	No orders.	
1048	Wood Work,	20	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
1049	Wood Work,	12	No orders.	
1050	Shirts,	27	No orders.	
1051	Engines and Cars,	1,204	Guard by secure railing both sides of large wheel to stationary engine. Provide suitable ventilators to roof of main machine-shop.	Complied.
1052	Gas Meters,	9	Guard by secure railing belt of stationary engine in upper car shop.	Complied.
1053	Mouldings,	10	No orders.	
1054	Car Repairing,	150	No orders.	
1055	Steam Fixtures,	127	Guard by secure railing fly-wheel to engine.	Complied.
1056	Fire Arms,	127	No orders.	
1057	Tools and Dies,	7	No orders.	
1058	Cyclometers,	14	No orders.	
1059	Tinners' Tools and Hardware,	85	Provide better ventilation in pickling room.	Complied.
1060	Architectural Iron Work,	350	No orders.	
1061	Doors, Sash, and Blinds,	30	Provide guard for variety moulding machine.	Complied.

1062	Wood Work,	25	No orders.	Complied.
1063	Wood Work,	5	Cover or sink flush projecting set screws in collars on main shaft in basement.	
1064	Special and Standard Machinery,	30	No orders. (Notified proper authority of insufficient egress.)	
1065	Tools and Band Saws,	12	No orders.	
1066	Special and Standard Machinery,	50	Repair and put in proper working order sliding hatches to elevator openings so that they will remain closed when elevator car is away from same.	
1067	Bicycle Fittings,	54	(Notified proper authority of insufficient egress.) Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in buffing and polishing-room.	Complied.
1068	Bicycle Chains,	5	No orders.	
1069	Bread and Pastry,	40	Guard main elevator openings by gates, chains, or bars, and keep closed when elevator is away from same.	Complied.
1070	Buttons,	21	No orders.	
1071	Lager Beer,	5	No orders.	
1072	Laundry Work,	21	No orders.	
1073	Rifles and Ammunition,	1,100	Guard by boxing large driving-belt running through floor of second and third story in new cartridge shop.	
1074	Carriage Hardware,	45	Guard driving pulleys to cutting-off machines on third floor of new building.	Complied.
1075	Starch,	23	No orders.	
1076	Wood Patterns,	5	No orders.	
1077	Gun Parts,	25	No orders.	
1078	Buckles,	130	No orders.	
1079	Caskets,	45	Guard by secure railing both sides of driving belt to new engine.	Complied.
1080	Oyster Opening,	110	No orders.	
1081	Wire,	101	No orders.	
1082	Screws,	100	No orders.	
1083	Files,	7	No orders.	
1084	Metals,	9	No orders.	
1085	Carriage Wood Work,	12	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1086	Cotton Cloth, Thread, Silk, Paper Machinery, Sewing Silk, Boxes, Paper,	111	No orders.	Complied. Complied.
1087		125	No orders.	
1088		10	No orders.	
1089		15	No orders.	
1090		135	No orders.	
1091		15	No orders.	
1092		85	Provide automatic guards for elevator openings. Cover or sink flush projecting set-screws in collars on shafting. Guard by secure railing fly-wheel of small engine. Cover or sink flush projecting set-screws in collars on shafting.	Complied. Complied.
1093	Writing Paper, Straw Board, Manilla Paper,	55	Guard automatic hatches to main freight elevator, on first floor, to prevent crossing over same.	
1094		30	Guard, by casing main driving belts running through floor in carding and spinning-room. Cover or sink flush projecting set screws in collars on shafting.	Complied.
1095		45	Guard low shafting near wet machine by steps leading over same. Cover or sink flush all projecting set-screws in collars on shafting. Provide suitable water-closet accommodation for employees.	
1096	Woolen Goods,	110		Complied.
1097	Pressed Paper,	8		
1098	Album and Binders' Board,	20		Complied.
1099	Electrical Apparatus,	10	No orders.	
1100	Silk,	1,952	No orders.	Complied. Complied.
1101	Pressed Paper,	11	No orders.	
1102	Lathe Chucks,	30	Repair water-closet near blacksmith shop so that same may be used. Guard flange coupling in annex to foundry building as suggested. Thoroughly clean water-closet to foundry building, and keep the same in good sanitary condition.	Complied. Complied.
1103	Gin,	11	Cover or sink flush all projecting set-screws in collars on shafting.	
1104	Wood Work,	6	No orders.	



1105	Silk Ribbons,	40	Cover or sink flush all projecting set-screws in collars on shafting. Box main belt on second and third floors at least four feet high. Repair and put in proper working order flushing apparatus of water-closets.	Complied.
1106	Hatters' Skiver,	29	Cover or sink flush all projecting set-screws in collars on shafting. Guard elevator opening on third floor by gates, bars, or chains, and keep closed when elevator is away from same. Provide new cable and cable pulley for elevator.	Complied.
1107	Wood Work,	15	Guard by proper hand rail stairway in finishing-room. Guard driving belt and counter wheel of defiance lathe. Guard by boxing large belt in west drying-room. Guard, by secure railing, fly-wheel to engine, on west side.	Complied.
1108	Woolen Goods,	110	No orders.	
1109	Worsted Yarn,	90	No orders.	
1110	Hide Tanning,	16	No orders.	
1111	Hide Tanning,	14	No orders.	
1112	Sewing Silk,	100	Cover or sink flush projecting set-screw in collar on printing spool shaft.	Complied.
1113	Carpenters' Chisels,	50	Cover or sink flush projecting set-screw in collar on stretcher shaft.	Complied.
1114	Springs,	8	No orders.	
1115	Yarns,	12	No orders.	
1116	Spectacles,	13	No orders.	
1117	Wood Turning,	21	No orders.	
1118	Coffin Hardware,	94	No orders.	
1119	Knives and Cutlery,	49	No orders.	
1120	Pins,	100	Close up unused doorway in old building in front of which cable passes. Cover or sink flush all projecting set-screws in collars on shafting. Fix cable on elevator drum so that it will run in grooves of drum correctly.	Complied.
1121	Coffin Trimmings,	30	No orders.	
1122	Knit Goods,	120	No orders.	
1123	Upholsterers' Hardware,	40	Guard, by secure railing, stairs leading to basement of storeroom in plating department. Put safety catches on elevator, in proper working order, before the same is used again.	Complied.

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1124	Clocks,	215	No orders.	Complied.
1125	Seythes,	25	No orders.	
1126	Bolts and Nuts,	89	No orders.	
1127	Job Printing,	8	No orders.	
1128	Hosiery and Underwear,	165	Box belt to shaft in finishing-room of hosiery building. Box belt to shaft under knitting-table in hosiery building. Guard, by iron railing, front and rear of fly-wheel pit in engine-room.	
1129	Machinery and Jobbing,	7	No orders.	Complied.
1130	Wood Patterns,	5	No orders.	
1131	Machinery and Jobbing,	6	Cover or sink flush all projecting set-screws in collars or shafting.	
1132	Shoes,	65	No orders. (Notified proper authority of insufficient egress.)	
1133	Hardware,	85	No orders.	
1134	Brick,	40	No orders.	Complied.
1135	Brick,	50	No orders.	
1136	Press Board,	45	Guard belt to beater engine by replacing railing. Cover or sink flush all projecting set-screws in collars on shafting.	
1137	Mineral Waters,	10	No orders.	
1138	Paper Goods,	65	Guard, by secure railing, fly wheel of engine in basement. Cover or sink flush all projecting set-screws in collars on shafting.	
1139	Brick,	127	Guard, by secure railing, fly-wheel to Wright engine.	Complied.
1140	Brick,	25	Guard, by secure railing, fly wheel to engine.	
1141	Lime,	25	No orders.	
1142	Sewing Silk,	42	No orders.	
1143	Hosiery,	57	No orders.	
1144	Lime,	20	No orders.	Complied.
1145	Lime,	15	No orders.	
1146	Pig Iron,	30	No orders.	
1147	Lime,	15	No orders.	
1148	Wood Work,	10	No orders.	

1149	Silox and Wood Filler,	35	No orders.	Complied.
1150	Pottery,	21	No orders.	
1151	Laundry Work,	9	No orders.	
1152	Hats,	180	No orders.	
1153	Couches, Lounges, etc.,	27	No orders.	
1154	Machinery,	7	No orders.	
1155	Paper Boxes,	10	Guard by boxing belt on third floor in forming-room of box department.	
1156	Sash, Doors, and Blinds,	6	No orders.	
1157	Silver-Plated Ware,	215	No orders.	
1158	Sheet Metal Goods,	8	No orders.	
1159	Hardware Specialties,	20	No orders.	
1160	Castors,	30	No orders.	
1161	Lamps and Brass Goods,	140	No orders.	
1162	Brass and Iron Goods,	156	No orders.	
1163	Saddlery Hardware,	80	Cover or sink flush all projecting set-screws in collars on shafting in buffing-room, first floor. Put blower in dip-room in proper working order, and keep the same in operation.	
1164	Silver-Plated Ware,	25	No orders.	Complied.
1165	Spoons,	21	No orders.	
1166	Hardware,	415	Guard by boxing belt running elevator in building No. 14. Guard elevator opening in building No. 14 in room over vise room by gates, bars, or chains, and keep closed when elevator is away from same.	
1167	Decorated Glassware,	24	No orders.	
1168	Dress Goods,	140	No orders.	
1169	Curtain Fixtures,	225	Cover or sink flush all projecting set-screws in collars on shafting in wood-working department.	
1170	Heavy Paper,	10	No orders.	
1171	Woolen Goods,	6	Guard main belt on second floor by casing at least three feet in height.	
1172	Rubber Goods,	25	Cover or sink flush all projecting set-screws in collars on shafting.	
1173	Rubber Goods,	225	Cover or sink flush all projecting set-screws in collars on shafting. Guard belt on first floor by boxing same.	
1174	Shears,	7	Cover or sink flush all projecting set-screws in collars on shafting.	
1175	Printing,	8	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1176	Combs.	21	No orders.	
1177	Horn Buttons,	8	No orders.	
1178	Flour and Feed,	5	No orders.	
1179	Underwear,	50	No orders.	
1180	Knit Goods,	8	No orders.	
1181	Special Machinery,	25	No orders.	
1182	Plumbers' Supplies,	60	Guard elevator opening on first floor by gates, bars, or chains, and keep closed when elevator is away from same.	
1183	Wood Work,	30	Guard by secure railing fly-wheel, crank, and driving-rod to engine. Cover or sink flush projecting set screw in collar on main shaft over boilers.	Complied.
1184	Emery Wheels,	10	No orders.	Complied.
1185	Soap,	37	No orders.	
1186	Brass Work,	10	No orders.	
1187	Dies and Moulds,	5	No orders.	
1188	Castings and Machinery,	80	No orders.	
1189	Wood Work,	125	No orders.	
1190	Castings, Engines, and Boilers,	75	Cover or sink flush all projecting set-screws in collars on shafting. Guard by secure railing fly-wheel of engine.	Complied.
1191	Beer,	15	No orders.	Complied.
1192	Illuminating Gas,	33	Thoroughly clean water-closet and keep the same in good sanitary condition.	
1193	Carriages and Trucks,	5	Guard by board partition the front of pulley on main shaft, near steps leading to furnace.	Complied.
1194	Shears,	315	No orders.	Complied.
1195	Car Wheels,	85		
1196	Pocket Outlery,	28	No orders.	

1197	Knife Handles,	15	Provide some suitable mechanical device whereby the elevator car will be securely held in event of accident to hoisting machinery or shipper rope.	Complied.
1198	Bicycle Supplies,	27	Guard by substantial railing both sides of bridge leading from main building to metal wash shop.	
1199	Spoons, Forks, and Shears,	86	Guard large belt in machine-room by boxing at least four feet high. Repair and put in good working order the exhaust system in dry polishing-room.	
1200	Brass Goods,	675	Introduce and operate, within three months from the date of this order, such appliances or devices as may be necessary to remove the excessive dust generated in rouge buffing-room. Provide better means for flushing water-closet under wire mill. Repair elevators in wire mill, and have them so that the safety-catches will operate. Introduce and operate, within three months from the date of this order, such appliances or devices as may be necessary to remove the excessive dust generated in polishing and buffing-room, south end of new mill. Provide better ventilation for dip-room.	Partially Complied.
1201	Shears,	50	Introduce and operate, within three months from the date of this order, such appliances or devices as may be necessary to remove the excessive dust generated in polishing-rooms.	
1202	Brass Goods,	175	No orders. (Notified proper authority of insufficient egress.)	
1203	Electro-Plating,	6	No orders.	
1204	Knives,	80	Replace hoods to polishing wheels in handle finishing-room. Repair water-closets in basement and upper floor, and keep the same in good sanitary condition.	
1205	Bicycle parts,	125	Guard front of fly-wheel to engine by extending railing to partition.	
1206	Cabinet Work,	200	No orders.	
1207	Cartridges,	1,102	Guard main belt in basement of north mill, as suggested.	
1208	Silver Flat Ware,	250	No orders.	
1209	Guns and Torpedoes,	5	Guard main belts on first floor in east and west sections of old mill by boxing at least four feet high. Guard by substantial iron railing, fly-wheel, driving-rod, and crank to engine.	Complied. Complied.



## REPORT OF INSPECTIONS — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1210	Braces,	62	No orders.	
1211	Machinery,	10	Cover or sink flush all projecting set-screws in collars on main and counter-shafting.	
1212	Printing,	20	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
1213	Cork Insulators,	35	Box belt on second floor to packing-machines, as suggested. Box both main belts on second floor at least three feet high. Box driving-belt to large circular saw on second floor. Guard elevator openings by keeping doors closed when elevator is away from same, or provide automatic gates or bars for same.	Complied.
1214	Carpets and Rugs,	150	No orders.	
1215	Electric Light,	6	No orders.	
1216	Shirts and Underwear,	3	Not running.	
1217	Castings and Needles,	50	Repair and put in good working order, exhaust system in grinding-room.	Complied.
1218	Sewing Machines,	600	No orders.	
1219	Iron Castings,		Thoroughly clean water-closets near the street, and keep the same in good sanitary condition.	Complied.
1220	Glass Presser Feeds,	5	No orders.	
1221	Brass Castings,	10	No orders.	
1222	Sewing Machine Attachments,	5	No orders.	
1223	Chain Specialties,	30	No orders.	
1224	Sewing Machine Shut-tles,	90	No orders.	
1225	Wire Springs,	18	No orders.	
1226	Brass Goods,	5	No orders.	
1227	Steam Boilers,	16	No orders.	

1228	Brass Goods,	70	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in the polishing-rooms.	
1229	Brass Goods,	15	No orders.	Complied.
1230	Buckles,	22	No orders.	
1231	Emery Wheels and Machinery,	25	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
1232	Power,	3	Cover or sink flush all projecting set-screws in collars on main shafting. Thoroughly clean and repair all water-closets in buildings Nos. 1 and 2, and see that same are kept in good sanitary condition.	
1233	Woodwork,	7	No orders.	Complied.
1234	Hats,	5	No orders.	
1235	Electro-plating,	25	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in buffing-room.	Complied.
1236	Tool Forgings,	7	No orders.	
1237	Brass Goods,	25	No orders.	
1238	Flour and Feed,	10	No orders.	
1239	Gas and Steam Fittings,	750	Cover or sink flush all projecting set-screws in collars on main shafting. Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in buffing-room No. 2.	Complied.
1240	Novelties,	50	No orders.	
1241	Machinery and Tools,	125	No orders.	Complied.
1242	R. R. Repairing,	40	No orders.	
1243	Suspender Webbing and Trimming,	100	Cover or sink flush all projecting set-screws in collars on main shafting.	Complied.
1244	Crucibles,	24	Cover or sink flush all projecting set-screws in collars on main and counter shafting.	
1245	Corrugated Iron Trimmings,	12	No orders.	
1246	Leather Belting,	8	No orders.	
1247	Flour, Feed, and Kindling Wood,	6	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances
1248	Plushes and Velvets,	400	Guard elevator opening to north elevator on lower floor by bar or chain. Cover or sink flush all projecting set-screws in collars on main and counter shafting. Thoroughly clean water-closet for males in 4-story building, and keep same in good sanitary condition.	Complied.
1249	Paper Boxes,	85	No orders.	
1250	Corsets,	350	Guard end of cutting-machine on 2d floor, as suggested. Cover or sink flush projecting set-screws in collars on main shafting.	Complied.
1251	Lamps,	400	No orders.	
1252	Light Hardware,	9	No orders.	
1253	Furniture Hardware,	210	Guard by boxing large belt near elevator opening on 5th floor.	Complied.
1254	Cutting Goods,	8	No orders.	
1255	General Jobbing,	0	Not running.	
1256	General Jobbing,	5	No orders.	
1257	Bicycles and Sundries,	175	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in polishing and buffing rooms.	Complied.
1258	Electric Switches,	10	Repair water-closets and provide suitable means for flushing the same.	
1259	Steel Dies,	8	No orders.	
1260	Shot Guns,	25	No orders.	
1261	Silver Ware,	200	Guard large belt in grinding-room by casing at least 4 feet in height.	Complied.
1262	Lamps and Gas Fixtures,	700	Guard by cross-bar doorway on 3d floor in finishing-room of spoon shop.	
1263	Printing Presses,	10	No orders.	
1264	Cloaks,	140	No orders.	
1265	Carriage Trimmings,	50	No orders.	
1266	Wood Work,	5	No orders.	
1267	Wood Work,	25	No orders.	
1268	Patent Leather,	25	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.

1269	Wheels & Wheel Stock,	24	Repair floor in engine-room.	Complied.
1270	Heavy Carriages,	125	Guard by secure railing crank and driving-rod to engine.	
1271	Beer,	32	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
1272	Cut Glass,	110	No orders.	
1273	Cutlery and Steel Pens,	125	Repair gates to elevator openings and keep them in good working order so that they will remain closed when elevator is away from same.	Complied.
1274	Coach Trimmings,	20	No orders.	
1275	Elastic Webbing,	200	Box main belt in machine-room, cutlery department, at least 3 ft. high.	Complied.
1276	General Jobbing,	7	Box new belt running counter shaft in covering-room at least 4 ft. high.	
1277	Electric Light,	14	No orders.	
1278	Wood Work,	20	No orders.	
1279	Carriage Springs,	50	No orders.	
1280	Brass Castings,	10	No orders.	
1281	Corsets,	1,750	Cover or sink flush all projecting set-screws in collars on shafting.	
1282	Clocks,	75	Replace box to guard end of shafting in stay department.	Complied.
1283	Wedding and Holiday Goods,	60	Repair gate to elevator opening on 2d floor in stock-room.	
1284	Silver Ware,	258	No orders.	
1285	Granite, Agate, and Glass Ware,	90	No orders.	Complied.
1286	Paper Boxes,	31	Thoroughly clean and disinfect outside water-closets and keep the same in good sanitary condition.	
1287	Electric Light,	14	No orders.	
1288	Aluminum and Bronze Castings,	25	No orders.	
1289	Mechanical Rubber Goods,	27	No orders.	
1290	Dress Shields,	55	No orders.	
1291	Corsets,	625	No orders.	
1292	Furniture Trimmings,	220	No orders.	

## REPORT OF INSPECTIONS.—CONTINUED.

Order No.	Goods Manufactured.	No of Em- ployes.	Orders Given.	Compliances.
1293	Hardware Specialties,	125	Provide overhead ventilation in dip and plating-room.	
1294	Bicycles,	225	Provide suitable ventilation in dip and lacquer-room of outside building. Provide better ventilation for japanning-room.	
1295	Hardware,	60	Replace hoods on solid emery-wheels in polishing-room. Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in dry polishing-room. Repair water-closet near office and provide trap for same to prevent sewer gases from escaping.	
1296	Organs,	30	No orders.	
1297	Special Machinery,	36	No orders.	
1298	Corsets,	100	No orders.	
1299	Lace Work,	30	No orders.	
1300	Job Printing,	22	No orders.	
1301	Malleable Iron Castings,	350	Cover or sink flush all projecting set-screws in collars on shafting.	Complied.
1302	Organs,	104	Put sliding gates to elevator in main building in proper working order.	Complied.
1303	Silver Novelties,	90	No orders.	
1304	Printing,	50	Box belt running near type-setting machine. Box large belt in book-printing department.	
1305	Printing,	50	Guard elevator openings by keeping bars down when elevator is away from same. Securely cover or cut off projecting key on pulley of large press near passageway. Cover or sink flush all projecting set-screws in collars on shafting in press-room.	Complied.
1306	Silver Ware,	20	No orders.	
1307	Æolians,	112	No orders.	
1308	Paper Boxes,	34	No orders.	
1309	Wood Work,	10	Guard door opening on 2d floor facing the street by cross bars.	



1310	Table Cutlery,	181	Put blower to bone handle polishing-lathe in proper working order so as to remove the excessive dust generated at said lathe.	Complied.
1311	Silver Plated Ware,	800	No orders.	
1312	Edge Tools and Boring Implements,	81	No orders.	
1313	German Silver Goods,	95	Box main belt in spinning-room at least three feet high. Box belt of fire pump in white shop at least four feet high. Provide such ventilation as will remove the excessive acid fumes from dip-room.	Complied.
1314	Piano Stools and Boxes.	83	No orders.	
1315	Graphophones,	75	Provide suitable ventilation for plating-room. Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in buffing-room.	
1316	Dress Silk,	200	Guard elevator openings by having hatches work automatically.	Complied.
1317	Piano and Organ Hardware,	100	Guard main belt on 1st floor by boxing same at least four feet high.	
1318	Cold Rolled Steel,	200	Provide better ventilation in dip-room. Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in polishing and buffing room.	
1319	Aluminum Bronze,	15	No orders.	
1320	Rolled Brass and Copper,	150	No orders.	
1321	Iron and Steel Forgings,	80	No orders.	
1322	Hot Rolled Steel,	100	Guard crank and driving rod to Corliss engine. Guard by boxing loose pulley on press as suggested. Cover or sink flush all projecting set-screws in collars on main shafting.	Complied.
1323	Fuel Gas,	15	No orders.	
1324	White Bronze Monuments,	35	No orders.	
1325	Silver Novelties,	80	Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated in buffing-room used for finishing.	
1326	Typewriting Machines,	325	No orders.	
1327	Car Couplings,	13	No orders.	
1328	Hardware Specialties,	35	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1329 1330	Wood Work, Pipe Cutting and Thread- ing Machinery,	25	No orders.	
1331	Card Paper,	20	No orders.	
1332	Nickel Plating,	18	No orders.	
1333	Harness,	15	Repair and put in working order exhaust system in buffing-room.	
1334	Machinery and Tools,	31	No orders. (Notified proper authority of insufficient egress.)	Complied.
1335	Laundry Work, Compressed Paper	26 63	No orders. (Notified proper authorities of inefficient egress.)	
1336	Boxes,	35	No orders.	
1337	Hatters' Fur,	125	Cover or sink flush all projecting set-screws in collars on main shafting.	Complied.
1338	Illuminating Gas,	6	No orders.	
1339	Ladies' Hats,	290	No orders.	
1340	Shirts and Underwear,	9	No orders.	
1341	Razors,	30	No orders.	
1342	Electric Specialties,	100	No orders.	
1343	Power Machines,	5	No orders.	
1344	Pianos,	25	Provide suitable guard for cutters to variety moulding machine.	Complied.
1345	Extracts and Dyes,	220	Guard by secure iron railing fly-wheel to Muller engine.	Complied.
1346	Lithographing and Printing Presses,			
1347	Art Metal Goods,	25 25	No orders. Introduce and operate within three months from the date of this order such appliances or devices as may be necessary to remove the excessive dust generated from buffing-wheels where no sand is used. Provide hoods over jars in dip-room and connect same with piping to large chimney. Provide separate water-closet accommodation for female operatives.	
1348	Printing,	6	No orders.	
1349	Piano Hardware,	7	No orders.	

1350	Laundry Work,	20	Provide separate water-closets for female operatives.	Complied.
1351	Special Machinery,	6	No orders.	
1352	Special Lathes,	5	No orders.	
1353	Cotton Twine,	65	No orders.	
1354	Corsets,	81	Provide secure hand-rails to stairs leading from 1st to 3d floor.	
	Traveling Bags and			
1355	Satchels,	18	No orders.	
1356	Beer,	12	No orders.	
1357	Notions for Ladies' Wear,	350	Guard shafting to center sewing-machine table on 2d floor as proposed.	Complied.
1358	Mattresses,	5	No orders.	
1359	Embossed Metal Goods,	28	No orders.	
1360	Infants' Underwear,	10	Repair and put in proper working order safety catches to elevator.	Complied.
1361	Cotton Duck,	700	No orders.	
1362	Planes and Rules,	50	No orders.	
1363	Cotton Duck,	37	No orders.	
1364	Brushes,	50	No orders.	
1365	Knobs and Handles,	20	Cover or sink flush projecting set-screw in collar on shafting for band-saw.	Complied.
1366	Rules,	95	No orders.	
1367	Toilet Paper,	14	No orders.	
1368	Silver Plated Ware,	275	No orders.	
1369	Silver Ware,	500	Box main belt in nut-pick room.	
1370	Silver Plated Ware,	106	No orders.	
1371	Wheels,	11	No orders.	
1372	Brass and Iron Goods,	400	No orders.	
1373	German Silver and Plated Ware,	67	Thoroughly clean and disinfect earth closets, and keep the same in good sanitary condition.	
1374	Job Printing,	37	No orders.	
1375	Job Printing,	23	No orders.	
1376	Shirts,	380	Guard by substantial iron railing fly-wheel to engine.	Complied.
1377	Novelties,	5	No orders.	
1378	Brass Goods,	300	Repair and put in proper working order safety catches on elevators in dip and stamp-rooms.	Complied.
1379	Watches,	300	No orders.	

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1380	Brass Goods,	800	Provide some automatic device for door to elevator opening in pipe-room of machinery department, so that the same will keep closed when elevator car is away from said opening.	Complied.
1381	Brass Goods,	500	No orders.	
1382	Mouldings and Wood Turning,	40	No orders.	
1383	Brass and Copper Tubing,	400	Repair and put in proper working order safely catches on elevator in bronze tube department.	
1384	Special Machinery,	62	Provide new cable for same elevator.	Complied.
1385	Game Traps,	11	Guard outside door openings on second and third floors by cross-bars.	
1386	Machinery,	341	No orders.	Complied.
1387	Torpedoes and Caps,	60	Guard all elevator openings by gates, bars, or chains, and keep them closed when elevator car is away from same.	
1388	Insulated Rubber Goods	84	Guard main belt, running horizontally, the entire length by a trough. Thoroughly clean and disinfect water-closet for male employes, and keep the same in good sanitary condition.	Complied.
1389	Rubber Goods,	55	No orders.	
1390	Silver Plated Ware,	25	Cover or sink flush projecting set-screws on drop counter shaft.	Complied.
1391	Silver Ware,	32	No orders.	
1392	Spoons and Forks,	61	No orders.	
1393	General Wood Work,	6	Guard by secure railing fly-wheel to engine. Provide suitable water-closet for employes. Cover or sink flush projecting set-screws in collars on main shaft near moulder, and on engine shaft near excentric.	Complied.

1394	Thread,	1,500	Guard elevator openings by automatic gates or hatches in thread store-house.	
			Guard by boxing belt in No. 2 dressing-room in size-room.	
			Repair and put in proper working order safety catches on elevators in black dye, bleach, packing, and winding-rooms.	
			Guard low shafting by boxing, or cut off the same, where running near passageway near last drawing frame in No. 4 mill.	
1395	Silk Machinery,	50	Repair and put in proper working order safety-catches on elevator.	Complied.
1396		100	Repair water-closet on second floor, so that bowl will flush properly.	
1397	Silk, Machine Twist and Sewing Silk,	80	No orders.	
1398	General Wood Work,	25	No orders.	
1399	Paper Boxes,	6	No orders.	
1400	Laundry Work,	13	No orders.	
1401	General Wood Work,	7	No orders.	
1402	Cotton Yarn,	100	Provide new cable for elevator.	
			Cover or sink flush projecting set-screws in collars on main and counter shafting in northeast end of mill.	Complied.
1403	Cotton Cloth,	400	Repair and put in proper working order safety-catches on two elevators, which failed to work when tested.	
			Provide some suitable mechanical device for two elevators, whereby the elevator cars will be securely held in event of accident to hoisting machinery or shipper rope.	Partially complied; balance in process.
			Guard elevator opening to one story elevator by automatic lift, gate, or bar.	
			Thoroughly clean old system water-closets, and keep the same in good sanitary condition.	
1404	Paper Machinery,	28	No orders.	
1405	Wood Type,	8	No orders.	
1406	Flocks,	5	No orders.	
1407	Jewelry,	17	No orders.	
1408	Cotton Yarn,	40	No orders.	
1409	Sewing Silk, Twist, and Braid,	228	No orders.	
1410	General Wood Work,	8	No orders.	



## REPORT OF INSPECTIONS — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1411	Cotton Cloth,	138	Repair and put in proper working order safety-catches on elevator.	Complied.
1412	Paper and Wood Boxes,	5	No orders.	
1413	Sewing Silk and Twist,	50	No orders.	
1414	Shoes,	26	No orders.	
1415	Cotton Cloth,	115	No orders.	
1416	Cotton Cloth,	125	Cover or sink flush all projecting set-screws in collars on shafting.	
1417	Cotton Cloth,	160	No orders.	
1418	Cotton Cloth,	200	Guard low shafting in passageway leading to engine-room by a sleeve or boxing.	
			Guard by secure railing or casing fly-wheel to engine.	
			Repair flushing system in water-closets of card and main weave rooms, so that the seats may be kept free from water.	Complied.
1419	Wood Work,	15	Guard by secure railing fly-wheel to engine.	Complied.
			Cover or sink flush projecting set-screws in collars on shafting in basement.	Complied.
1420	Shoes,	90	Replace wooden soil pipe for closet by one of iron.	
1421	Steam and Hot Water Heaters,	40	No orders.	
1422	Soap.	16	No orders.	
1423	Fine Paper,	50	No orders.	
1424	Cotton Cloth,	75	Repair, thoroughly clean, disinfect, and provide better ventilation for water-closets, and keep the same in good sanitary condition.	Complied.
1425	Cotton Cloth,	240	No orders.	
1426	Cotton Cloth,	100	No orders.	
1427	Satinet,	12	No orders.	
1428	Bricks,	20	No orders.	
1429	Cotton Hosiery,	18	No orders.	
1430	Cotton Cloth,	205	Thoroughly clean and disinfect water-closets and keep the same in good sanitary condition.	Complied.

1431	Seamless Hosiery,	5	No orders.	
1432	Reeds,	5	No orders.	
1433	Leather Supplies,	20	No orders.	
1434	Wood Work,	6	No orders.	
1435	Cotton Cloth,	300	No orders.	
1436	Cotton Cloth,	70	No orders.	
1437	Heavy Paper,	9	No orders.	
1438	Woolen Goods,	72	No orders.	
1439	Cotton Cloth,	20	No orders.	
1440	Satinet,	36	No orders.	
1441	Cotton Cloth,	80	No orders.	
1442	Candle Wicking,	8	No orders.	
1443	Wood Turning,	6	No orders.	
1444	Heavy Cotton Yarns,	14	No orders.	
1445	Dying and Finishing Goods,	150	Cover or sink flush all projecting set-screws in collars on main shafting.	
			Guard by secure covering all projecting bolts in plate couplings near hangers as suggested by special agent.	
1446	Cotton Cloth,	806	No orders.	
1447	Cotton Cloth,	156	No orders.	
1448	Cotton Cloth,	203	No orders.	
1449	Underwear,	25	No orders.	
1450	Cotton Cloth,	10	No orders.	
1451	Bobbins,	6	No orders.	
1452	Woolen Goods,	32	No orders.	
1453	Iron Castings,	9	No orders.	
1454	Cotton Cloth,	350	Repair and put in proper working order safety-catches on elevator in old mill.	
			Provide better means for the ventilation of water closets in old mill, thoroughly clean and disinfect them and keep same in good sanitary condition.	
1455	Sheeting Paper,	7	Guard by casing or railing belt running through floor near paper machine.	Complied.
			Cover or sink flush all projecting set-screws in collars of overhead [shafting].	
			Guard by casing or railing fly-wheel to engine.	Complied.

## REPORT OF INSPECTIONS. — CONTINUED.

Order No.	Goods Manufactured.	No. of Em- ployes.	Orders Given.	Compliances.
1456	Straw and Leather Board, Needles, Underwear, Needles, Wrapping Paper,	6	Guard by casing or railing fly-wheel to engine.	Complied.
1457		6	No orders.	
1458		58	No orders.	
1459		9	No orders.	
1460		30	Cover or sink flush, projecting set-screw in collar on low shafting rear of paper machine. Guard belt and cones over paper machine as suggested where oiler has to pass.	
1461	Architectural Tiles,	15	No orders.	Complied.

## SYNOPSIS OF INSPECTION LAWS OF DIFFERENT STATES.

### MASSACHUSETTS.

All factories must be kept clean and well ventilated ; and in factories employing five or more persons, and in workshops employing five or more children, young persons or women, inspectors may make such changes, and compel the application and use of any mechanical means, without incurring unreasonable cost, which in their judgment is necessary to secure proper ventilation. Public buildings and schoolrooms come under the factory laws providing for sanitation and ventilation. Sweat-shops are regulated by license laws requiring cleanliness in and about the tenement house so used, and a tag upon all clothing made under the system, guaranteeing that it is free from vermin and all infectious or contagious matter.

Belting, shafting, gearing, and drums in factories must be securely guarded. Wherever manufacturing machinery is propelled by steam, suitable communication must be provided between each room where such machinery is placed and the engine-room, in order to control the motive power in case of accident. Machinery other than steam engines must not be cleaned while running if objected to by an inspector. The openings for hoistways, hatchways, well-holes, and elevators in all buildings must be protected in such manner as inspectors may direct, and any elevator deemed dangerous or unsafe by an inspector shall be placarded as such, and its use prohibited until made safe.

Inspectors may order fire-escapes, safe stairways inside or outside of buildings, and the altering of doors and windows suitable for speedy egress in all public buildings, and in all factories, workshops, mercantile establishments, hotels, tenements, etc., having at any time more than ten persons, or any floor above the second, and all such floors shall require suitable means for extinguishing fire.

Sanitary Inspection.

Safe-guards.

Protection from fire and other danger.

Inspection of  
Steam Boilers.

Three special inspectors are appointed to inspect all uninsured steam boilers of a certain capacity and used in connection with stationary engines, or for heating public buildings, and to examine engineers and firemen as to their competency to have charge over such steam plants.

## Accidents.

Manufacturing and mercantile establishments must report "forthwith" all accidents resulting in the death of an employe, or which prevents his return to work within four days after the occurrence.

## RHODE ISLAND.

Sanitary Inspec-  
tion.

Separate closets for sexes are required, and wash and dressing-rooms for females; to be located to meet the demands of health and propriety.

## Safe-guards.

Belting, shafting, gearing, drums, and other dangerous machinery, and all vats, pans, and other structures filled with molten metal or hot liquid must be properly and securely guarded, and all hoisting shafts and well-holes be properly secured, and elevators be provided with traps, automatic doors, or railings.

Protection from  
Fire.

Inspectors are empowered to provide and direct improvements in means of egress in case of fire.

## Accidents.

Fatal accidents must be reported within forty-eight hours, and all serious accidents within three weeks from time of occurrence.

NOTE.—The factory act applies to all establishments where five or more persons are employed.

## CONNECTICUT.

Sanitary Inspec-  
tion.

Factory buildings must be kept clean and sufficiently ventilated. The inspector may order mechanical appliances to carry dust generated by machinery out of workrooms. On complaint of employes and after due investigation suitable water-closets must be provided in shops and factories employing five or more persons, and seats in all establishments for female employes.

## Safe-guards.

Belting, shafting, gearing, drums and other machinery when deemed necessary by the inspector must be guarded. Machinery, excepting steam engines, must not be cleaned while running. Elevator and floor openings generally must be guarded with safety gates, hatch covers, and other devices as the inspector shall direct, and all elevator cars be furnished with proper safety attachments.



Every story above the first, of every schoolhouse, orphan asylum, insane asylum, reformatory, opera house, hall, boarding-house with twelve inmates, and tenement house with five families must be provided with more than one way of egress, inside or outside, and every such building, and in addition thereto, every factory and workshop employing twenty or more persons above first floor, more than two stories in height, shall be provided with one or more fire-escapes.

Protection from  
Fire in hands of  
local authorities  
for enforce-  
ment.

It shall be the duty of the building inspector of each city, the warden of each borough, and the first selectman of each town not having a building inspector, either by himself or by some proper person appointed by him, to inspect all of the above-named buildings at least once each year between April first and October first, and to see that the provisions of this act are complied with ; and for such purpose he shall have the right to enter any of said buildings in the daytime, between the hours of nine and five o'clock. And said city, borough, or town shall fix and pay the compensation for all services under the provisions of this act.

### NEW YORK.

In all factories and workshops between the hours of 6 A. M. and 6 P. M. 250 cubic feet of air space is required for each employe, and 400 cubic feet from 6 P. M. to 6 A. M., but inspectors may grant less air space where rooms are lighted at night time by electricity. All workrooms are required to be kept in clean condition, and exhaust fans and other means of ventilation may be required in workrooms in order to carry away dust or other impurities. In all establishments separate closets must be provided for the sexes—with suitable wash and dress-rooms for females—and seats must be provided for the use of women when not actively engaged at their duties. Rooms, ceilings, and walls must be white-washed or painted by direction of the inspectors. Sweat-shops are controlled by license laws requiring cleanliness and thorough disinfection of premises, and restricting the work done in each tenement workshop to the members of the family dwelling therein. A tag upon all sweater-made clothing is required in proof of its being made in accordance with the requirements of the law and free of infectious matter. The sanitary regulation of bakeries is provided for by special enactment. Four inspectors are appointed to carry

Sanitary Inspection.

out requirements of the law, the full text of which can be found published elsewhere.

**Safeguards.**

Elevator openings, hoisting shafts, and well-holes must be enclosed with railing or casing, and be provided with properly adjusted trap or automatic doors and gates. Cables, gearing, shafting and other machinery or apparatus must be guarded and kept in safe condition. Handrails must be provided on all stairways, and stairs screened where females are employed, and when deemed necessary stairs must be covered with rubber covers.

**Protection from fire and other disaster.**

Buildings of more than three stories, with employes on or above the third story, must be provided with suitable fire-escapes, easy of access, and free from draft from any hoistway, stairs, or other floor openings. Doors must open outwardly and kept unfastened during work hours.

**Accidents.**

Every case of accident resulting in death or serious injury to any employe must be reported with full details within 48 hours after its occurrence.

## NEW JERSEY.

**Sanitary Inspection.**

Inspectors have power to regulate heating, lighting, and other sanitary conditions. They can prohibit the over-crowding of factories and workshops, and to produce proper ventilation in factories where dust is created they can have suitable mechanical means applied, and in all establishments where women are employed, suitable and separate closets for the sexes must be provided, with wash and dress-rooms for females. Factories where dusty work is performed, and wherein women and children are employed, shall be whitewashed or painted once in twelve months. Bakeries must be thoroughly ventilated and be provided with proper plumbing connections, and must have no connection within or without the room with any water-closet, earth-closet, ash-pit, or other nuisance. Employes must have sleeping quarters separate from bake-rooms.

**Safeguards.**

Belting, shafting, gearing, drums, and other machinery of a dangerous character, and all vats, pans, and other structures containing molten metal or hot liquid must be suitably protected. All floor openings for hatchways, hoistways, well-holes, and elevators must be provided with automatic or trap-doors, and otherwise be guarded with a railing three feet high. Stairs in use by females must be screened, and no female must be allowed to clean machinery in operation or to work between its traversing parts.

Explosives or inflammable matter must not be placed or used in such manner as to obstruct egress or, to endanger life in case of fire. Upon all buildings for manufacturing purposes two or three stories in height, where thirty or more persons are employed above the first floor, one or more fire-escapes may be ordered by inspectors, and suitable means for extinguishing fire provided for each floor. Protection from fires, etc.

Accidents resulting in death must be reported within twenty-four hours after, and those which prevent the return to work of the injured person within two weeks, must be reported to an inspector within twenty-four hours after expiration of said two weeks. Accidents.

### PENNSYLVANIA.

Heating, lighting, ventilation, and other sanitary conditions come under the regulation of inspectors. Suitable and separate water-closets and wash and dress-rooms must be provided for females; they must not adjoin closets for males, and shall be kept clean, properly screened, and ventilated. Special enactment regulates the sweat-shop system. Sanitary Inspection.

All floor openings for elevators must be properly guarded and provided with automatic traps or doors. Belting, shafting, gearing, drums, and other dangerous machinery must be sufficiently guarded, and all vats, pans, and structures containing molten metal or hot liquid must be surrounded with proper safeguards. Shifting belts and pulleys must be provided with shifters. Safeguards.

Inspectors can provide all buildings more than two stories high with one or more fire-escapes, after a certain model designated by statute, and with life ropes and chains as any such buildings may require. Protection from fires, etc.

All accidents causing death or serious injury to any person must be reported twenty-four hours after their occurrence. Accidents.]

NOTE.—While the factory laws of Pennsylvania embrace manufacturing, mercantile, laundrying, and renovating establishments, any such place employing less than five persons does not come within the meaning of the act.

### OHIO.

Heating, lighting, ventilation, and other sanitary requirements in factories, workshops, and mercantile establishments are under the inspector's supervision, and to secure such he may cut through Sanitary Inspection.

walls, floors, roofs, and ceilings, or make changes in sewerages and plumbing, and require proper closet arrangements, and may demand separate closets for the sexes, with toilet and dressing-rooms for females on the floors on which they work, and seats for females to be used by them when not actively engaged.

Safeguards.

Inspectors must order guards for belting, shafting, gearing, elevators and other machinery, also for vats, pans, and other structures filled with molten metal or hot liquid ; also efficient safety gates for elevator openings, guarding of hatchways and hoisting apparatus in floors or outside of buildings ; the repair of all elevators and all gearing, and of defective walls, roofs, ceilings, stairways, and doors, and all other improvements necessary to secure the safety of employes.

Protection from fires, etc.

Inspectors have power to examine all buildings as to their safety, and to order all necessary alterations to obtain the same ; also to provide for stairways and fire-escapes and other efficient means of egress, and handrails on all stairways, and may require in all halls and other buildings for public assemblage means of extinguishing fire on all floors above the first, and that all doors in such buildings shall open outwardly.

Accidents.

Employers must report all accidents upon blanks furnished by inspectors ; those resulting in death within seven days after, and those in bodily injury, necessitating six days' consecutive loss of time, within thirty days after.

## MICHIGAN.

Sanitary Inspection.

Means must be provided to carry dust from all dust-creating machinery ; separate closets must be provided for each sex, and wash and dress-rooms for all females, and such closets and dress-rooms must be kept in clean condition continually.

Safeguards.

Elevators, hoisting shafts, or well-holes must be secured and equipped with trap or automatic doors, and all gearing, shafting, and other apparatus kept in safe condition. Hand-rails must be provided on stairways, and stairs screened, and, when necessary, stair-steps must be provided with rubber covers.

Protection from fires, etc.

Factory buildings of three or more stories must be provided with fire-escapes — easy of access and free from draught of hoistway or stairway. Doors must be properly hung and open outwardly, and not fastened during working hours.

NOTE.— All places where goods, wares, or products are manufactured, repaired, cleaned, or stored in cities and all such places outside of cities employing five or more persons, come within the provisions of the factory law.

### MINNESOTA.

All workrooms must be well lighted, heated, and ventilated and kept in clean condition. Exhaust fans must be adjusted for carrying dust from emery wheels and grindstones. Separate closets for the sexes must be provided, and wash and dress rooms where females are employed, and seats for their use in mercantile establishments. Bakeries, including hotel and restaurant kitchens, must have no connection within or without the room with any water-closet, earth-closet, ash pit, or other nuisance, and employes or others are not to be permitted to live or sleep in bakeries. Sanitary Inspection.

The law is specific in authority and includes almost the whole range of machinery employed in industrial operations. It provides that saws, planers, wood-shapers, jointers, sand-papering machines, ironing mangles, set-screws, drums, belts, shafting, cables, fly wheels, dynamos, and other electrical apparatus and appliance, vats, pans, and such other structures, and all dangerous places in and about factories and other works must be guarded. Loose pulleys must be adjusted where practicable, and shift belts provided with shifters. All elevators and other floor openings must be fenced or otherwise protected, and all elevators supplied with safety devices. Safeguards.

In all factory and other buildings in which people are employed, more than one means of egress must be provided. Doors leading therefrom must open outward, kept unfastened and unobstructed during working hours. Hand-rails on stairways must be provided, and stairs properly screened when used by females. One or more fire-escapes shall be placed upon all factory and other such buildings if three or more stories in height. Plan of escape is defined by enactment. Protection against fire.

Steam boilers are inspected by a separate state department constituted of five inspectors. Inspection of Steam Boilers.

Accidents to employes requiring the aid of surgeon or resulting in death must be reported by employer within ten days after occurring. Accidents.



## MISSOURI.

Sanitary In-  
spection.

Inspectors have power to prevent over-crowding in all establishments where labor is employed, and can regulate heating, lighting, ventilating, and other sanitary arrangements, and may order suitable mechanical means for carrying away dust and other impurities generated by manufacturing. And where females are employed at unclean work, wash and dress-rooms must be provided, and stairs used by females must be properly screened, seats must be provided and conveniently located so that females can use them when not required to be on their feet, and where both sexes are employed separate and distinct water-closets must be provided for each sex.

## Safeguards.

Belting, shafting, gearing, and drums in all establishments must be safely and securely guarded, and all vats, pans, ladles, or structures filled with molten metal or hot liquid, or any furnace must be surrounded with safe-guards, and all platforms, passageways, and other arrangements about railroad yards must be made comparatively safe. The openings of hatchways, elevators, and well-holes must be protected by trap doors, self-closing hatches or safety catches, or railing three feet high. Where guards are not practicable, notice of danger must be posted.

Protection  
against fire.

Establishments two or more stories high, in which twenty or more persons are employed above first floor, must be provided with fire-escapes, and in addition for every twenty persons employed above the second floor, one rope or other portable fire-escape; and each floor must be supplied with means for extinguishing fire. All doors must open outwardly, and must not be locked or bolted during labor hours. Any building or any part thereof supposed to be unsafe, or means of egress insufficient, the inspector may order necessary changes.

## Accidents.

All accidents resulting in death, or which prevents an employe's return to work within two weeks, must be reported.

NOTE. — All factories employing five or more persons, and all workshops where children, young persons, or women are employed come under the inspector's authority so far as sanitary provisions are required, while the factory or inspection laws as a whole apply to establishments in general employing ten or more persons.

## ONTARIO.

Every factory must be kept clean and not overcrowded, and must be ventilated so as to render harmless, as far as practicable, all unwholesome effluvia, and to take away dust and other injurious impurities generated by manufacturing machinery. Separate closets must be provided for the sexes, each set to have separate approaches, and to be kept clean and well ventilated at all times. Sanitary Inspection.

Belting, shafting, gearing, fly-wheels, drums and other moving parts of machinery, vats, pans, caldrons, reservoirs, wheel-races, flumes, water channels, doors, openings in floors or walls, bridges, and all dangerous structures must be as far as practicable securely guarded. Hoistways, hatchways, elevators, and well holes must be protected by such automatic appliances as the inspector may desire, and all elevator cabs and cars must be provided to the satisfaction of the inspector with suitable safety attachments. No machinery other than steam engines must be cleaned while in motion, if inspector so orders, and no woman must be allowed to clean mill gearing while in motion nor to work between the traversing parts of machinery. Safeguards.

Factories three or more stories high must be provided with fire-escapes, unless supplied with sufficient tower stairways protected with iron doors. All inside and outside doors must open outwardly, and all doors entering stairway towers or leading to fire-escapes must be kept unlocked and unbolted during working hours. In every factory there must be provided such means for extinguishing fire as the inspector may direct. Protection from fire, etc.

Accidents resulting in bodily injury to an employe must be reported by the employer within six days after, and if accident shall prove fatal, within twenty-four hours from time of its occurrence. Accidents.

NOTE. -- The word "factory" includes manufacturing establishments and workshops where six or more persons are employed. The section limiting age and hours of labor does not apply to canning factories in summer months.

# LAWS

RELATING TO

## FACTORIES AND FACTORY INSPECTORS.

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CONNECTICUT.

(General Statutes).

### CHAPTER CXLV.

SECTION 2264. The inspector of factories shall, as often as practicable, carefully examine all buildings and places where machinery shall be used, and shall have authority to enter such buildings and places at all proper times for the purposes of such inspection.

SEC. 2265. All factories and buildings where machinery shall be used shall be well ventilated, and kept as clean as the nature of the business will permit. The belting, shafting, gearing, machinery, and drums of all factories and buildings where machinery shall be used, when so placed as, in the opinion of the inspector, to be dangerous to the persons employed therein while engaged in their ordinary duties, shall, as far as practicable, be securely guarded. No machinery other than steam engines in a factory shall be cleaned while running, after notice forbidding the same is given by the inspector to the owners or operators of the factory.

SEC. 2266. The inspector may order the opening of all hoistways, hatchways, elevator-wells, and wheel-holes, upon every floor of any factory or other building where machinery shall be used, to be protected by good trap-doors, self-closing hatches, and safety-catches, or other safeguards, such as will insure the safety of the employes in such factory or other buildings where machinery shall be used, and all due diligence shall be used to keep such trap-doors closed at all times, except when in actual use by an occupant of the building having the use and control of the same.

(Amended by Chap. CXVIII, Public Acts, 1893. See page 88.)

SEC. 2267. Every person or corporation managing or operating any factory, or owning or controlling the use of any other building where more than five persons shall be employed at labor, shall provide suitable water-closet accommodations for the use of the persons employed, and shall keep the same in good sanitary condition.

SEC. 2268. It shall be the duty of the inspector to enforce the provisions of this chapter by giving proper orders or notices to the persons or corporations owning, operating, or managing the factories or buildings inspected by him, and also to make complaint to the state's attorneys in the several counties respectively of all violations of this chapter.

SEC. 2269. Any person, firm, or corporation being the owner, lessee, or occupant of any factory or building included within the provisions of this chapter, or owning or controlling the use of any room in such building, shall, for the violation of any provisions of sections 2265, 2266, or 2267, forfeit to the use of the state not less than fifty nor more than five hundred dollars, and shall also be liable to any employe for all damages suffered by him by reason of such violation. It shall be the duty of the state's attorneys in the several counties to collect forfeitures under this chapter, but no suit shall be brought for any such violation, either in behalf of any person or the state, until four weeks after notice has been given by the inspector to such person, firm, or corporation of any changes necessary to be made to comply with the provisions of said sections, and not then, if, in the meantime, such changes have been made in accordance with such notification. Nothing herein shall be construed as limiting in any way the right of a person injured to bring an action to recover damages for the same, as though this chapter had not been enacted.

(Amended by Chapter CCXXV, Public Acts, 1889. See page 86.)

SEC. 2270. The orders and notices given by the inspector under this chapter shall be written or printed, and signed by him officially, and may be served by himself or any proper officer or indifferent person, by leaving an attested copy thereof with or at the usual place of abode of the person upon whom service is to be

made; and the notice, properly endorsed with the doings of the persons or officer serving the same, shall be returned to the office of the town clerk of the town in which is located the factory, building, or business to which such notice appertains, where it shall be kept on file. Such notice, and copies thereof, duly certified by the town clerk, shall be *prima facie* evidence that notice was given as therein appears. Notice to one member of a firm shall be notice to every member thereof, and notice to the president, secretary, or treasurer of a corporation shall be notice to such corporation. The fees for serving such orders and notices, unless served by the inspector, shall be the same as for the service of process in civil actions, and shall be included in the necessary expenses of the inspector and paid by the state.

SEC. 2271. It shall be the duty of the comptroller to provide suitable rooms in the capitol at Hartford for the use of the inspector, and to furnish him blank forms for the purpose of giving notices and orders required by this chapter, and for annual reports to be made to the governor. The inspector shall keep, in books provided by the comptroller for that purpose, copies of all notices and orders given by him, and a record of all inspections and examinations made, and upon the expiration of his term of office shall file his books of record with the secretary of the state.

SEC. 2272. The inspector may from time to time employ special agents to assist him in his inspections and examinations, who shall receive compensation for the time actually employed in such service only. The total amount expended under this section shall not exceed in any one year the sum of fifteen hundred dollars, which shall be paid by the state upon proper vouchers by the special agents, which shall be signed by the inspector.

(Amended by Chapter CCVI, Public Acts, 1893. See page 89.)

(Public Acts of 1889.)

#### CHAPTER CLXXIII.

An Act concerning Printing of Reports of the Inspector of Factories.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

SECTION 1. The comptroller shall annually cause to be printed, at the expense of the state, five thousand copies of the report of the inspector of factories.



SEC. 2. This act shall take effect upon its passage.  
Approved, June 4, 1889.

(Public Acts of 1889.)

#### CHAPTER CCXXV.

An Act relating to Factories.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

Section 2269 of the general statutes is hereby amended by inserting between the words "sections" and the figures "2265" in the fifth line thereof, the figures "2264," so that the first sentence of said section as amended shall read as follows: Any person, firm, or corporation being the owner, or lessee, or occupant of any factory or building included within the provisions of this chapter, or owning or controlling the use of any room in such building, shall, for a violation of any provisions of sections 2264, 2265, 2266, 2267, forfeit to the use of the state not less than fifty nor more than five hundred dollars, and shall also be liable to any employe for all damages suffered by him by reason of such violation.

Approved, June 19, 1889.

(Amended by Chapter 206. See page 90.)

(Public Acts of 1893.)

#### CHAPTER LIX.

An Act concerning the Employment of Custodians of Elevators.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

SECTION 1. No person, partnership, or corporation shall permit or employ any person under the age of sixteen years to have the care, custody, operation, or management of any elevator.

SEC. 2. Any person, partnership, or corporation violating the provisions of this act shall be punished by a fine of not less than five nor more than twenty-five dollars for each offense.

Approved, April 19, 1893.

(Public Acts of 1893.)

## CHAPTER LXXVII.

An Act concerning Seats for Female Operatives.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

SECTION 1. Every person, partnership, or corporation employing females, in any mercantile, mechanical, or manufacturing establishment in this state, shall furnish and provide suitable seats for the use of all females so employed, and shall permit the use of such seats by said females when they are not necessarily engaged in the active duties for which they are employed.

SEC. 2. Any person, partnership, or corporation violating any of the provisions of this act shall be punished by a fine of not less than five dollars nor more than fifty dollars for each and every offense.

Approved, April 19, 1893.

(Public Acts of 1893.)

## CHAPTER CXVIII.

An Act concerning Elevators.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

Section 2266 of the general statutes is hereby amended to read as follows: The inspector of factories may order the opening of all hoistways, hatchways, elevator-wells, and well-holes, upon every floor of every factory, mercantile establishment, or other building where machinery shall be used, to be protected by good trap-doors, self-closing hatches, and safety-catches or other safeguards, such as will ensure the safety of the employes in such factory, mercantile establishment, or other building where machinery shall be used, and all due diligence shall be used to keep such trap-doors closed at all times, except when in actual use by an occupant of the building having the use and control of the same. All elevator cabs or cars, whether used for freight or passengers, shall be provided with some suitable mechanical device, if con-

sidered necessary by the said inspector, whereby the cab or car will be securely held in the event of accident to the shipper-rope or hoisting machinery, or from any similar cause, and said mechanical device shall at all times be kept in good working order.

Approved, May 18, 1893.

(Public Acts of 1893.)

#### CHAPTER CCIV.

An Act for the Preservation of the Health of Factory Employees.

*Be it enacted by the Senate and House of Representatives in General Assembly convened :*

SECTION 1. Whenever the inspector of factories, on the complaint of any person, after due investigation, shall find it necessary for the preservation of the health of the employes in any manufacturing establishment, factory, or mill in which is carried on the business of buffing, polishing, or grinding metal, or any operations in which an excessive amount of dust is generated, that the excessive dust resulting from said operations should be removed from the atmosphere of the rooms or apartments used for that purpose, he shall, in writing, direct the person or persons or corporation owning or occupying said premises, or carrying on business in such premises, within three months from the date of said order, to introduce and operate such appliances or devices as may be necessary to remove, so far as the nature of the business will permit, such excessive dust or foreign matter from the atmosphere of such mill, factory, or apartment used for the purposes aforesaid; provided, such appliances or devices do not restrict or interfere with the aforesaid business or operations.

SEC. 2. Any violation of any proper order made or given by the inspector of factories, under the provision of the preceding section, shall be punished in the manner provided in section 2269 of the general statutes.

Approved, June 14, 1893.

(Public Acts of 1893.)

## CHAPTER CCVI.

An Act relating to Duties of the Inspector of Factories.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

Section 2272 of the general statutes is hereby amended to read as follows: The inspector may from time to time employ special agents to assist him in the performance of the duties of his office. Such special agents while so employed shall have the same power and authority as the inspector, subject to his approval. The total amount expended under this section shall not exceed in any one year the sum of three thousand dollars, which shall be paid in the same manner as the expenses of other departments of the state government, upon proper vouchers by the special agents, signed by the inspector.

Approved, June 14, 1893.

(Substitute for House Bill No. 263.)

Public Acts of 1895.

## CHAPTER CCVI.

An Act concerning Inspection of Factories.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

SECTION 1. Section 2269 of the general statutes is hereby amended to read as follows: Any person, firm, or corporation, being the owner, lessee, or occupant of any factory or building included within the provisions of this chapter, or owning or controlling the use of any room in such building, shall, for any violation of sections 2265, 2266, or 2267 of the general statutes, or for obstructing or hindering the inspector of factories in carrying out the duties of his office, forfeit to the use of the state not more than fifty dollars. It shall be the duty of the state's attorneys in the several counties to collect forfeitures under this chapter, but no

suit shall be brought for any such violation until four weeks after notice has been given by the inspector to such person, firm, or corporation of any changes necessary to be made to comply with the provisions of said sections, and not then if, in the meantime, such changes have been made in accordance with such notification. Nothing herein shall be construed as limiting in any way the right of a person injured to bring an action to recover damages for the same, as though this chapter had not been enacted.

SEC. 2. Any person, firm, or corporation aggrieved by any order of an inspector of factories may appeal to the superior court in the county where the person, firm, or corporation owns, leases, or occupies the factory or building in relation to which said order relates, within four weeks after notice of such order shall be given. Said appeal shall operate as a supersedeas, shall be made in writing, and shall contain a brief statement of the facts and reasons of appeal and a citation to the inspector of factories to appear before said court, and said court or any judge thereof may direct the time of appearance and the manner of service. Said court may review the doings of the factory inspector, may examine the questions in issue, and may confirm, change, or set aside the doings of the factory inspector, and may make such orders in the premises, including orders as to costs, as it may find to be proper and equitable.

SEC. 3. All acts and parts of acts inconsistent herewith are hereby repealed.

Approved, July 9, 1895.

(House Bill No. 269.)

#### CHAPTER CCXCIV.

##### An Act concerning Department Reports.

*Be it enacted by the Senate and House of Representatives in General Assembly convened:*

SECTION 1. All reports heretofore or hereafter required to be made by state departments, institutions, commissions, boards, or any recipients of state money shall, from and after the passage of this act, be made to the governor and by him transmitted to the general assembly.



SEC. 2. All reports above referred to shall be made to and including the thirtieth of September, 1895, and annually thereafter, and shall be published on or before the thirty-first day of December following; provided, however, that the reports of the insurance commissioner and the state board of education may be made at times and for the periods now required by law, and the reports of the state board of agriculture and of the agricultural experiment stations may be made as heretofore.

SEC. 3. All acts and parts of acts inconsistent herewith are hereby repealed.

SEC. 4. This act shall take effect from its passage.

Approved, July 4, 1895.

